The OIL WEEKLY

10¢ A COPY

Exclusively Devoted To The Production and Transportation of Oil and Gas

March 1, 1929 **Volume 52. No. 11**

For deep fields where tool joints MUST be tight!

Wilson *drop-forged* Rotary tongs

These Tongs are made of forged steel —the only drop-forged Tongs on the market. Forging eliminates the equations common in ordinary castings, and permits of great strength with light weight. Furthermore the levers, hangers, pins, latches, springs and dies are interchangeable—a feature not found in other Tongs. The powerful leverage obtained by the double compensating fulcrum, plus the greatly increased strength of the metal permits your driller to make up tighter joints without fear of straining the Tong.

Carried in stock by your Supply Company

Succeeding WILSON & WILLARD MFG. CO.

WILSON OIL TOOLS CORP.

OIL TOOLS DIVISION

of

Byron Jackson Pump Co.

2501 E. Vernon Avenue, Los Angeles, California

Products—Elevators · Tongs · Underreamers · Circulating Heads · Rotary Drive Bushings · Pistons and Valves for Slush Pumps · Slotted Screen Pipe

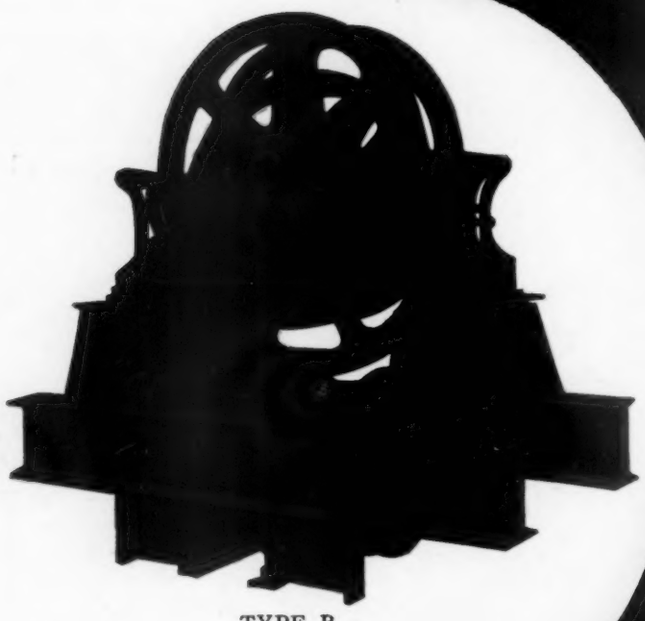
IT'S A WILSON

Factory Representatives:
Tulsa, Okla.,
214 E. Brady St.
Houston, Texas,
2201 Breckenridge St.
Fort Worth, Texas,
814 Dan Waggoner Bldg.
New York, N. Y.,
1245 Graybar Bldg.

First in *Safety, Strength, Speed, Convience*

The 5 sheave Regan Crown Block

-for Mid-Continent Service



TYPE B

Embodies the essential features of the extra-heavy duty

TYPE A

Regan Crown Block

with special beam assembly and five sheaves - - - - - - - -

Desirable for Mid-Continent Service

Prompt Deliveries

Regan

Forge & Engineering Co.

Manufacturers of Oil Well Equipment — Quality — San Pedro, California U.S.A.

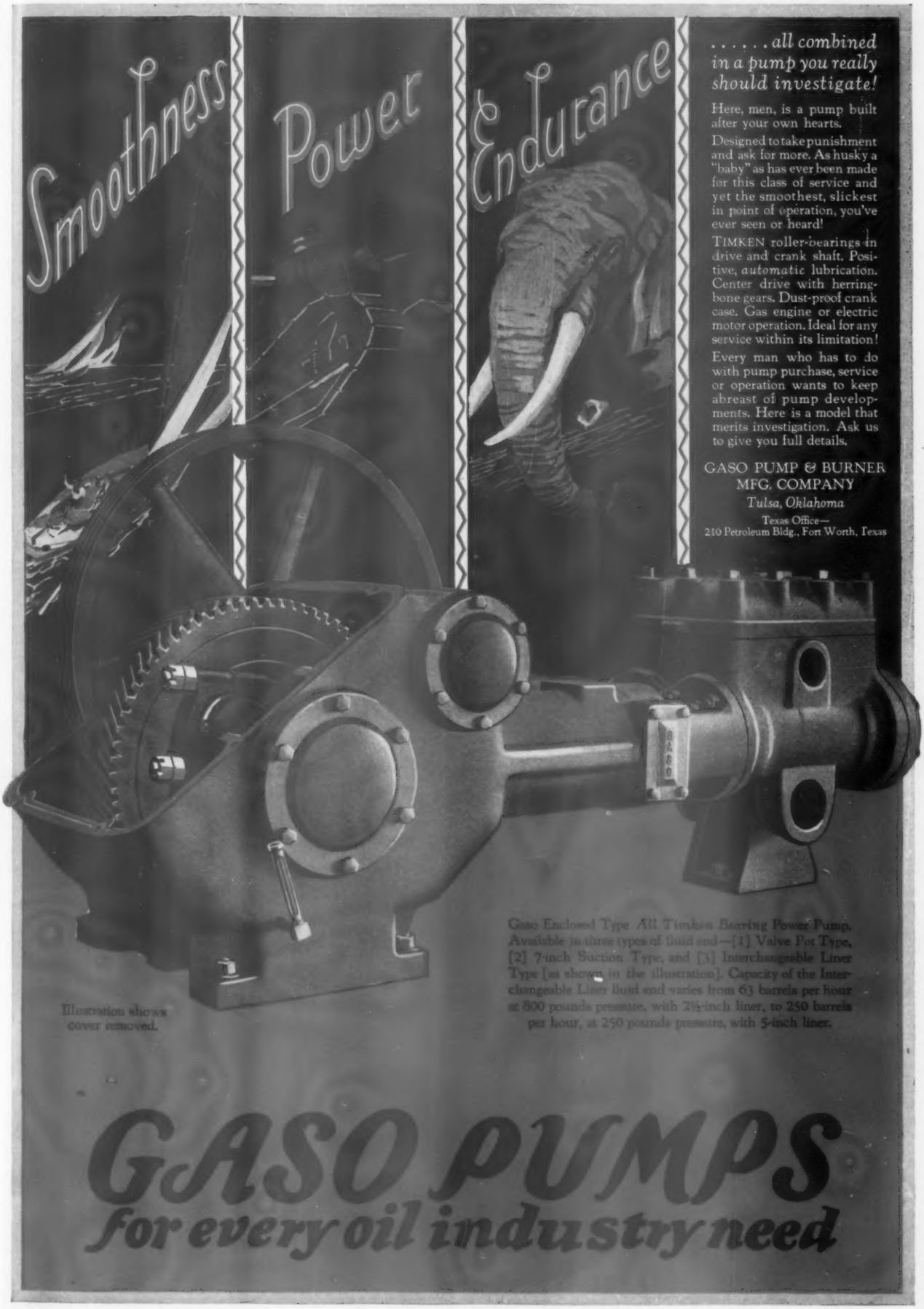
Main Office, Mid-Continent Division:
Dallas, Texas, 1504 Magnolia Bldg.
Oklahoma City, Okla., 2420 W. 21st St.

New York City, 75 West St.,
Wm. Braat, Manager

Maracaibo, Venezuela,
Wm. Adams, care Amer. Consul

Pecos, Texas, P. O. Box 444
Tampa, Texas

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3301 Buffalo Drive, Houston, Texas. Subscription price $1.00 per year; 10 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1897.



. . . . . *all combined in a pump you really should investigate!*

Here, men, is a pump built after your own hearts.

Designed to take punishment and ask for more. As husky a "baby" as has ever been made for this class of service and yet the smoothest, slickest in point of operation, you've ever seen or heard!

TIMKEN roller-bearings in drive and crank shaft. Positive, *automatic* lubrication. Center drive with herring-bone gears. Dust-proof crank case. Gas engine or electric motor operation. Ideal for any service within its limitation!

Every man who has to do with pump purchase, service or operation wants to keep abreast of pump developments. Here is a model that merits investigation. Ask us to give you full details.

GASO PUMP & BURNER MFG. COMPANY
Tulsa, Oklahoma
Texas Office—
210 Petroleum Bldg., Fort Worth, Texas

Illustration shows cover removed.

Gaso Enclosed Type All Timken Bearing Power Pump. Available in three types of fluid end—[1] Valve Pot Type, [2] 7-inch Suction Type, and [3] Interchangeable Liner Type [as shown in the illustration]. Capacity of the Interchangeable Liner fluid end varies from 63 barrels per hour at 800 pounds pressure, with 2½-inch liner, to 250 barrels per hour, at 250 pounds pressure, with 5-inch liner.

GASO PUMPS
for every oil industry need

Say you saw it in The OIL WEEKLY

SAFETY

Why buy a *perfect* product—and take a chance on its being damaged enroute to you?

Why spend hours of costly time cleaning threads on pipe and couplings—rethreading too—when all this waste can be eliminated positively, by specifying Colona Thread Protectors?

Put on at the mill—they assure you that the pipe will reach you in perfect condition.

Every maker of pipe can give you this added service—insist on Colona and save on your labor.

Colona Manufacturing Company
Pittsburgh, Penna.

Patented

COLONA
PIPE THREAD PROTECTORS

The excitement, rush and feverish activity of a boom. Forty-five wells to be cemented; each owner clamoring for prompt attention .... Fourteen hours later the cementing job was done—cleanly, efficiently, scientifically.

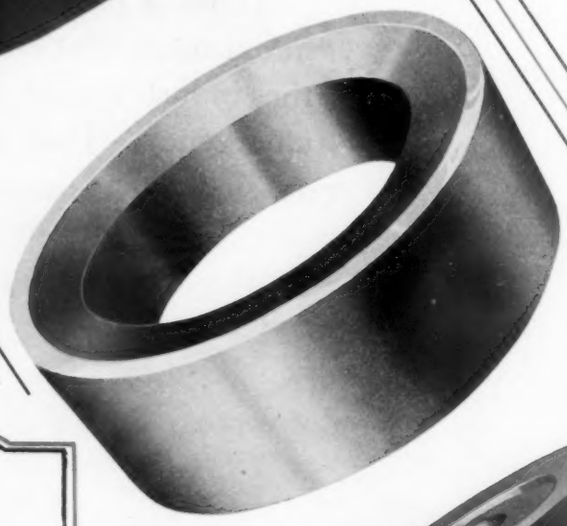
There is only one organization in existence that could have given the industry such service in an emergency. That organization is

HALLIBURTON
OIL WELL CEMENTING COMPANY
DUNCAN, OKLAHOMA

Say you saw it in The OIL WEEKLY

SECO

---STRAIGH
SHOT



Mission Products

KIBELE SELF-EXPANDING PISTON
SECO VALVE SEAT PULLER
GUY WIRE TIGHTENER
SECO VALVES
HOSE CLAMP

Say you saw it in The OIL WEEKLY

VALVES

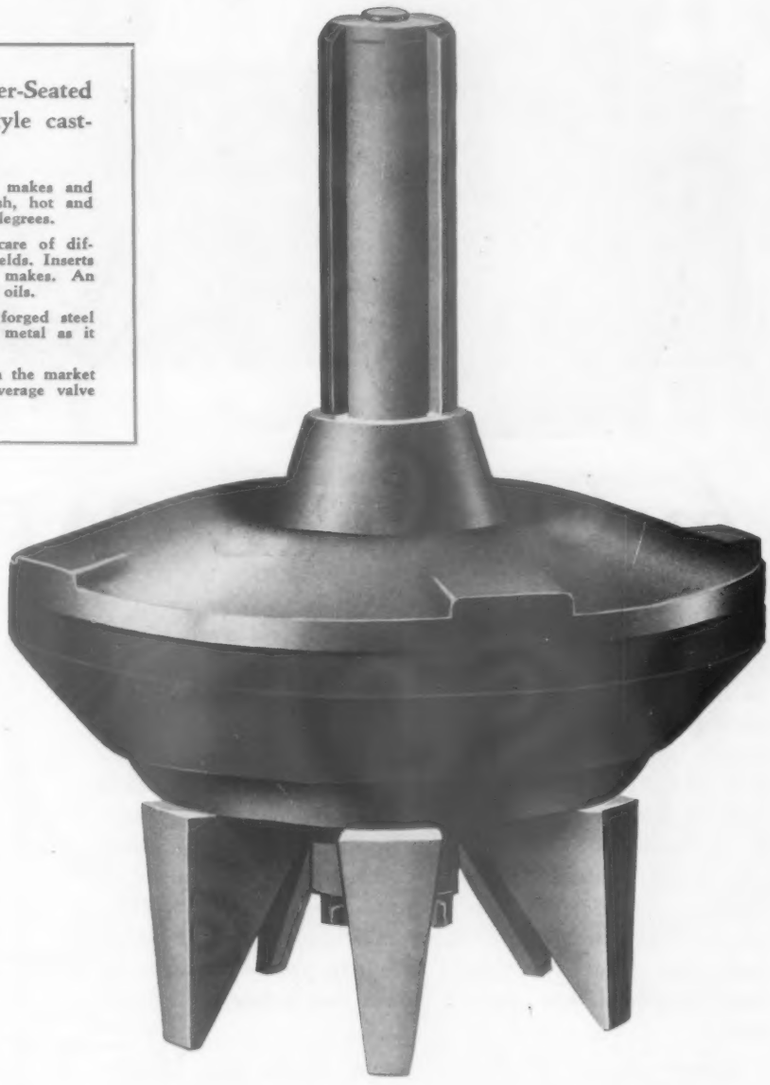
A NEW Drop-Forged Steel Taper-Seated Valve for less money than old style cast-steel, flat-seated type.

The SECO Valve is manufactured for all makes and sizes of pumps, particularly for handling slush, hot and cold water, gasoline, and hot oils up to 300 degrees.

Various kinds of inserts are used to take care of different drilling formations found in different fields. Inserts are of Dick Balata or any other well known makes. An especial composition is made for hot or cold oils.

All other parts are made of high carbon, forged steel to prevent gritty fluids from eating into the metal as it does with cast parts.

This is by far the most economical valve on the market according to all tests. It will outlast the average valve four or five times.



Call at your supply store or write us for detailed information.

MISSION

Sales Company, Inc.,

Esperson Bldg.

HOUSTON

Smaller *in size* ...

but of LIKE CAPACITY

The result aimed at by Metric engineers in re-designing Ironcase Meters was to reduce size in its relation to capacity. How well this has been accomplished is strikingly presented in this photograph. The two meters, old style and new, stand side by side in this view which shows the true and accurate size relation. To the left is the modern 250-B Ironcase having a capacity of 5,000 cu. ft. per hour. At the right, towering huge in comparative size and weight, is the old 200-B Ironcase which has practically the same capacity under modern conditions of measurement. Much useless weight has been eliminated. The resultant compactness has many advantages that are highly important. Three years have definitely proved these to be better meters of their type than have ever before been available.

Advantages of the modern Ironcase Meter

Less weight for like capacity
Smaller space required for installation
Longer valve links
Light weight valve covers
Better wearing valves
Alemite (non-stop) lubrication system
Diaphragm drains
Timken Bearings
Corrosion-proof cases

The Last Step

A *Corrosion Proof Varnish* is now being applied which covers every bit of surface on the interior of the cases of these meters. This compound is a special Metric formula proved to give practically perfect protection against gases carrying sulphur, or any agent which reacts with the interior walls of the meter to cause deterioration and ultimately affect the accuracy of operation. This coating is sprayed on the castings after they have been thoroughly sandblasted. Complete penetration and coverage is thus assured. It is then baked at high temperature. After this treatment an Ironcase Meter can handle all gases and its interior case walls will stay new and smooth indefinitely.

Westcott & Greis, Inc.
Sales—

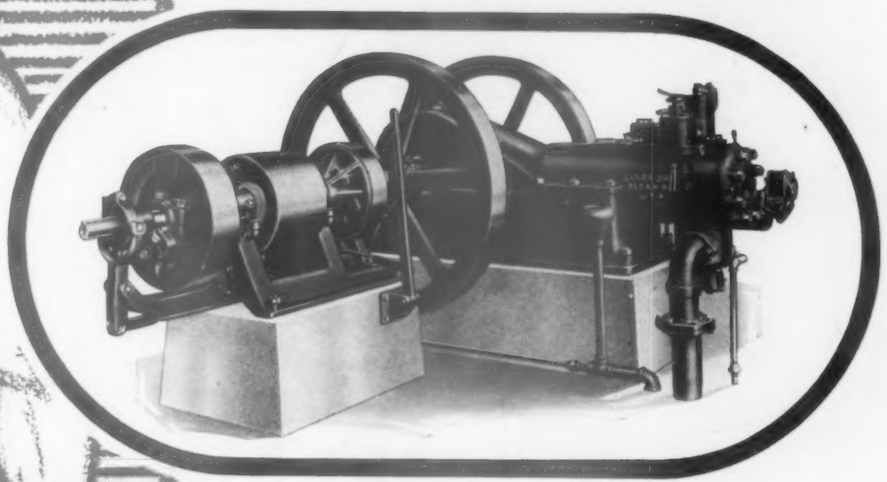
Dallas—TULSA—Los Angeles
—Service

IRON-METERS-CASE

Say you saw it in The OIL WEEKLY

The Clark Pumping Engine Clutch is~

SUPER STRONG



The CLARK Heavy Duty Pumping Clutch has a double bearing and a clutch shaft that is full floating within a hollow shaft carrying the belt pulley and clutches. There is no strain on the engine crankshaft—either from the belt pull or from the clutches. All working parts are enclosed, and correctly lubricated. The CLARK Pumping Engine is completely enclosed, automatically lubricated, four cycle, 40 H.P. at 275 R.P.M.

Get full description of this dependable and durable pumping unit Clark Bros. Company, Olean, N.Y. Branches and Warehouses 125 W First St., Tulsa, McCamey and Sweetwater, Texas, and Artesia, N.M. Smith, Booth, Usher Company, 228 S. Central Ave., Los Angeles, and 50 Fremont St., San Francisco

CLARK

Take Texas, for instance

Here's How They Consider Bettis Protectors

One of the largest operators in the Winkler County field recently let three drilling contracts with a provision that Bettis Protectors be used for drilling inside the casing.

One of the largest contractors in Winkler has used a string for drilling one well and makes the statement that due to the big saving on his drill pipe and collars he could buy a complete string on each well he drills and still make money.

Another Winkler contractor declares that after his first well Bettis-equipped was completed the paint was still on the tool joints and collars, whereas in previous wells he was constantly changing collars and wearing out tool joints.

One of the largest Gulf Coast operators sets 20" surface casing about 1000 feet and drills inside with 4" drill pipe. He uses Bettis Protectors on all of this despite the clearance. He says that without the protectors the whip is enough to break the seat and fatigue the drill pipe.

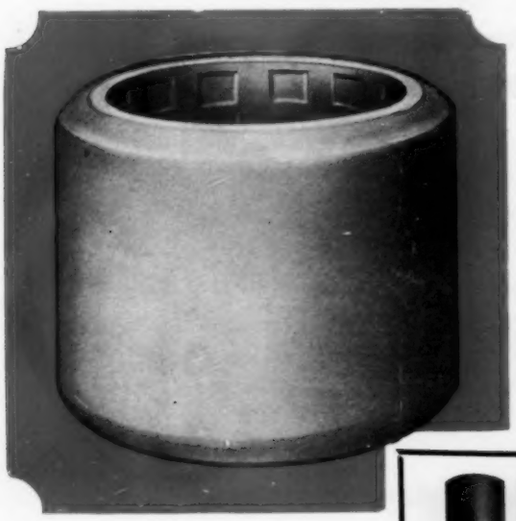
Another Winkler operator makes the astonishing statement that with 3000 feet of drill pipe in the hole one man can turn the pipe with a Stilson wrench, which would be utterly impossible without these Protectors. Another Gulf Coast operator says he gets 20% longer life from the wire line, attributing this to the decrease in friction in pulling out of hole.

A String of Bettis Protectors installed at Goose Creek last March, 11 months ago, is still in use and the collars have never been changed. The owner says they look like they will never wear out.

In one of the largest Gulf Coast fields an operator says they drilled nine holes last year and made nine wells, all perfect completions, with Bettis Protectors. The Superintendent said, "This may be luck, but this is the first time in the Company's operations that all the wells were completed without a failure, and I think Bettis Protectors had a lot to do with it."

And so the story goes.

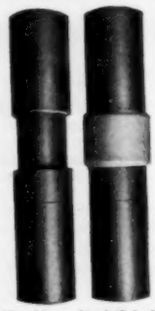
Bettis Protectors are serving in practically every Texas field.



Fully Patented

"Best bet yet"

106,279
ordered within 13 months



Hopkins Anti-Friction Tool Joints

Bettis Protectors are now available in Hopkins Anti-Friction Tool Joints and Collars which are sold by manufacturers licensed by us. Fully covered by patents.

Seamless
No metal-to-metal contact.
Increased production.
Collars and joints saved.
No wear on casing.
Less power consumed.
Fewer twist-offs.
Water breaks reduced.
Save on brake bands.
No metal added to hole.
Save fuel.
More wells drilled per season.
Straighter hole drilled.
Ease on drilling equipment.
Less water to pump.

Patterson-Ballagh Corp.
Insurance Exchange Building, Los Angeles, Calif.
New York Office—39 Cortlandt St.
Mid-Continent Distributors:
Bettis Sales Co., 617 Public National Bank Bldg., Houston, Texas
Stocks carried at
Los Angeles, Long Beach, Santa Fe Springs, Ventura, Bakersfield, Coalinga, Tulsa, Houston, Wink and New York City

Bettis Protectors - *The genuine anti-friction Rubbers*

TITUSVILLE STEAM ENGINES

10½ x 10 Semi-Enclosed

Always a steady flow of power for *quick* starting stopping or reversing

You know and we know how modern rotary drilling demands an engine that is super powerful at all speeds as the loads fluctuate from no load to full load instantly. The Titusville 12 x 12 Twin Cylinder Steam Engine will meet these demands in flexibility and load, as it will develop 300 H.P. at 200 R.P.M. with 150 pounds Steam Pressure.

This is ample power to meet the MOST SEVERE conditions encountered in rotary drilling.

12 x 12 Roller Bearing, Totally Enclosed

Powerful · Flexible · Economical · *Always reliable*

Just a few of the many features of the new Acme Twin Engine. Well balanced moving parts, accurate machine work, absence of vibration and reduced starting torque due to the application of roller bearings to the crank shaft at the main bearings,—are all details of construction that make for greater power, flexibility, economy and reliability of operation.

The TITUSVILLE IRON WORKS Co.
TITUSVILLE · PENNA.

Titusville Acme Boilers Single and Twin Steam Drilling Engines Tico Gas Engines Band Wheel and Geared Powers

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2449-55 Hunter St.,
Los Angeles, Calif.

Titusville Acme Rotaries Acme Swivels and Speed Draw Works High Pressure Boilers Crown Blocks Slush Pumps

RUGGED · ENDURING

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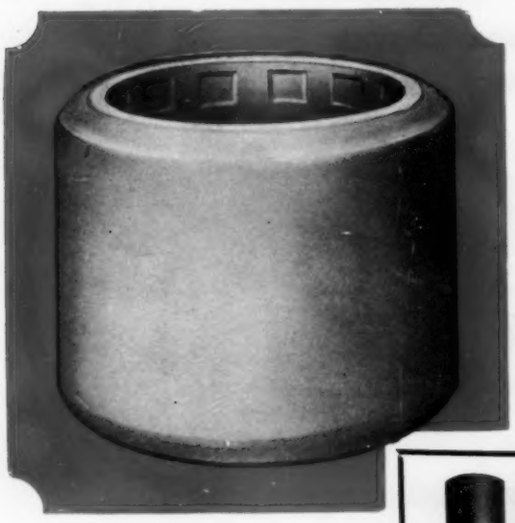

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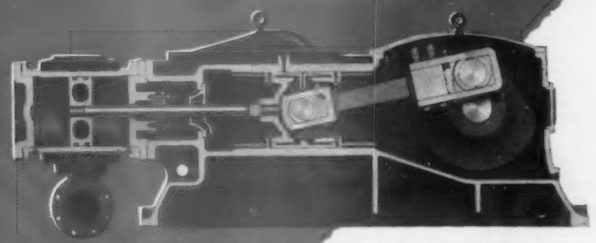

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TITUSVILLE - PENNA.

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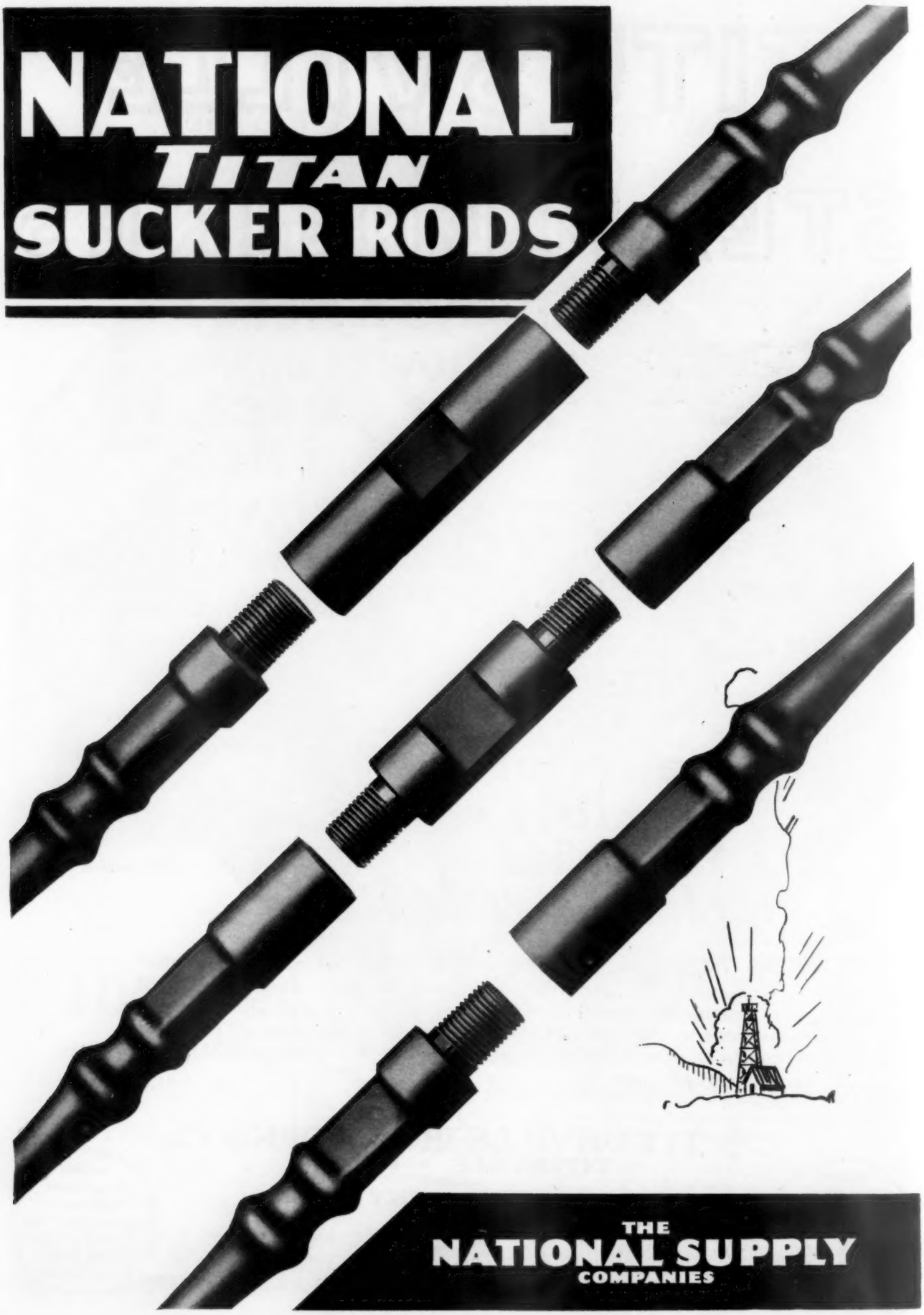
High Pressure Boilers
Crown Blocks
Slush Pumps

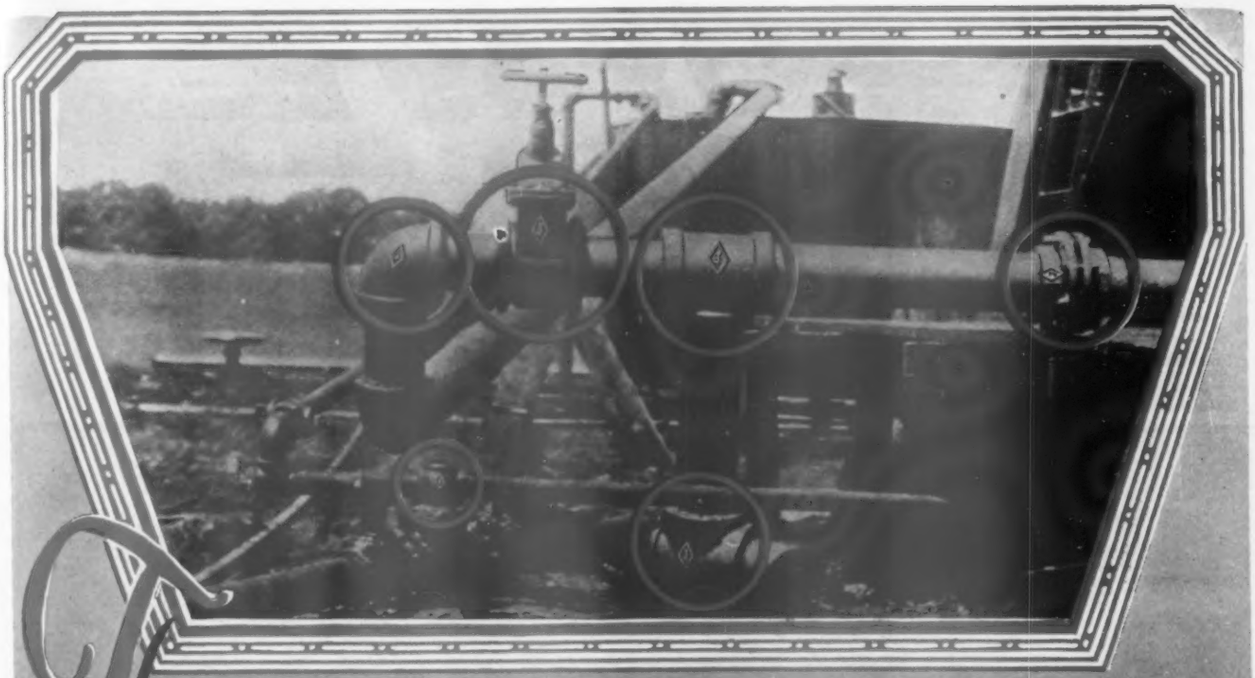
RUGGED - ENDURING

NATIONAL TITAN SUCKER RODS



THE NATIONAL SUPPLY COMPANIES

Say you saw it in The OIL WEEKLY



There will be no leaks in this flow line

JARECKI VALVES AND FITTINGS ARE USED

The builder of this flow line, like most other builders of flow lines, wanted primarily a durable, trouble-free and leak-proof line—valves that seat properly, operate easily and shut tightly; fittings of uniform thread, fit, structure and tightness.

Experienced oil men will agree that in selecting JARECKI Valves and Fittings he adopted one of the most dependable of all methods of being sure that his requirements would be fulfilled. It is but natural that buyers should come to expect unusual service from products embodying the mechanical and metallurgical knowledge that seventy-seven years' experience represents.

. . . . The steady growth of the JARECKI company is the best indication that these buyers are never disappointed.

Jarecki

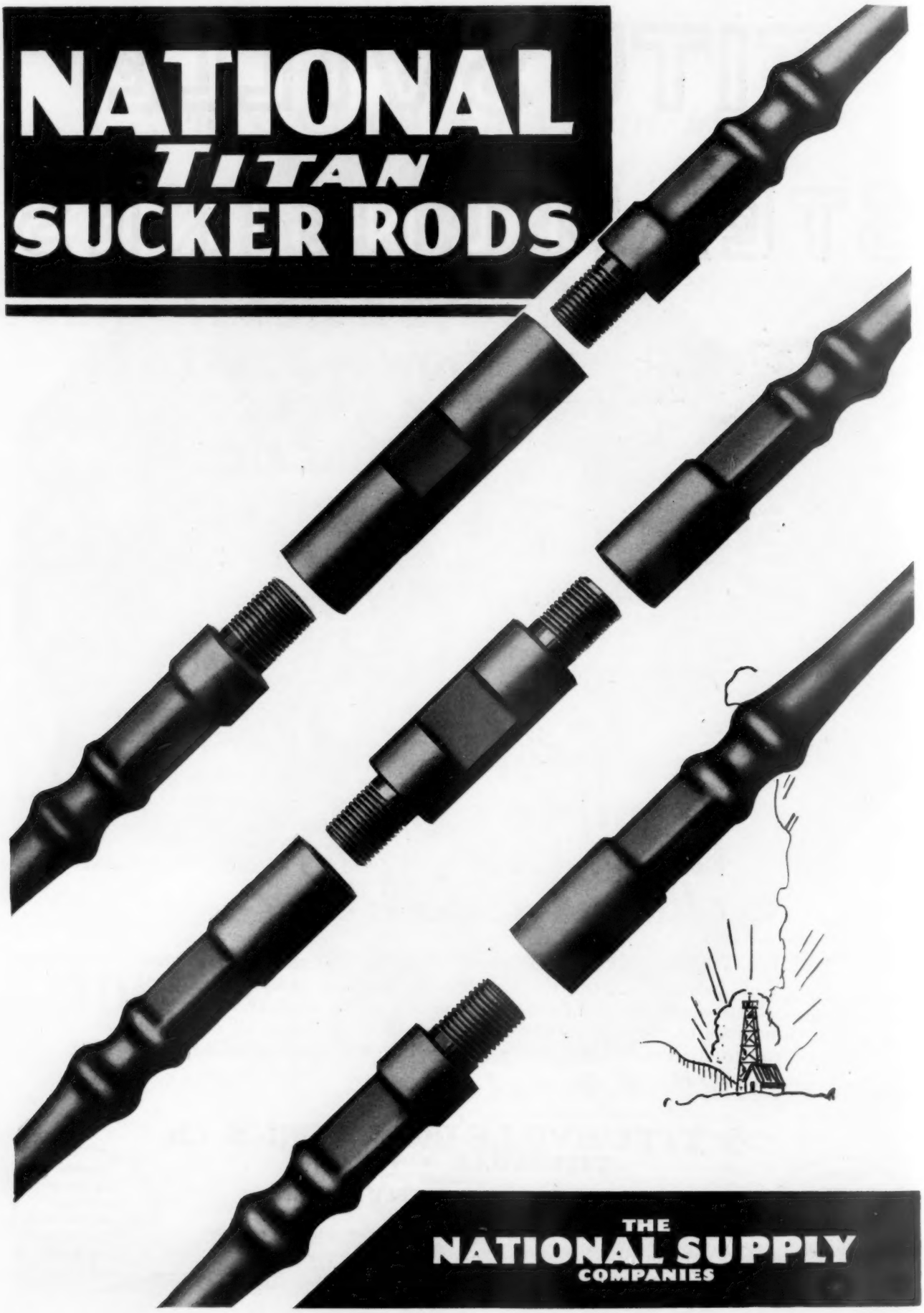
MANUFACTURING COMPANY

General Office, St. Louis, Mo. Home Office and Factory—Erie, Pa., U. S. A.

Branch stores at all important places in the Oil Country.

District Offices { Pittsburgh, Pa.; El Dorado, Kan.; Tulsa, Okla.; Newark, Ohio; Eastland and Dallas, Texas; Lawrenceville, Ill.

NATIONAL TITAN SUCKER RODS



THE NATIONAL SUPPLY COMPANIES

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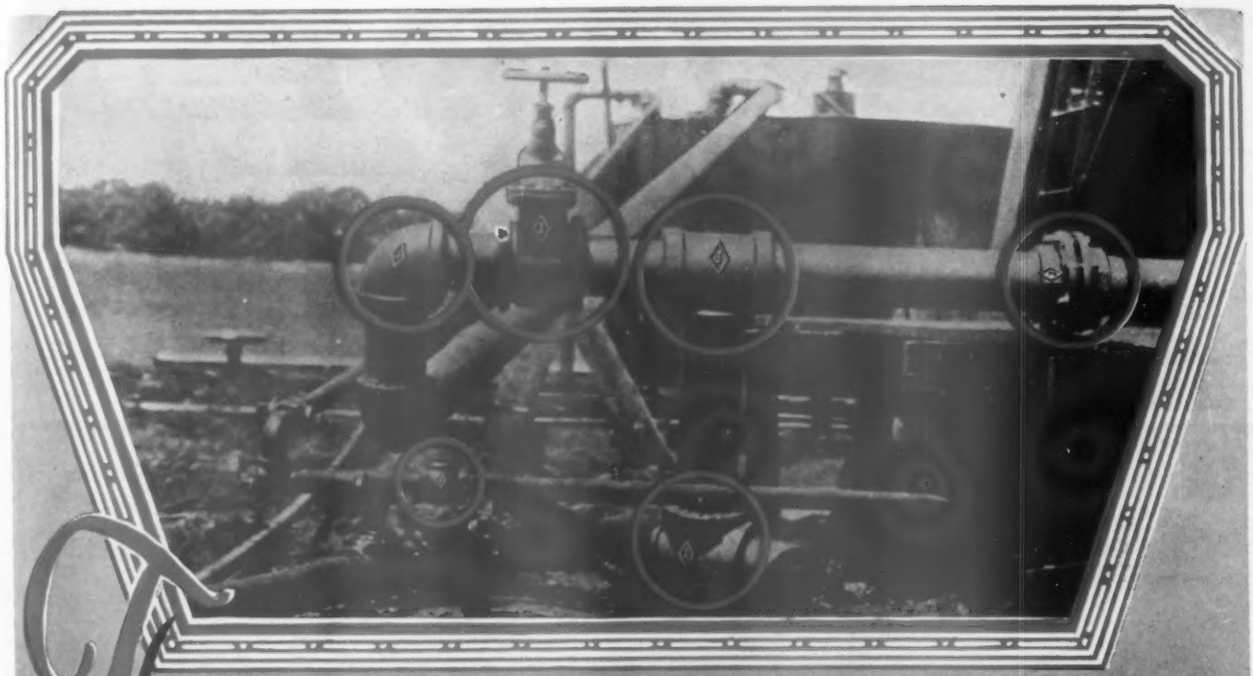

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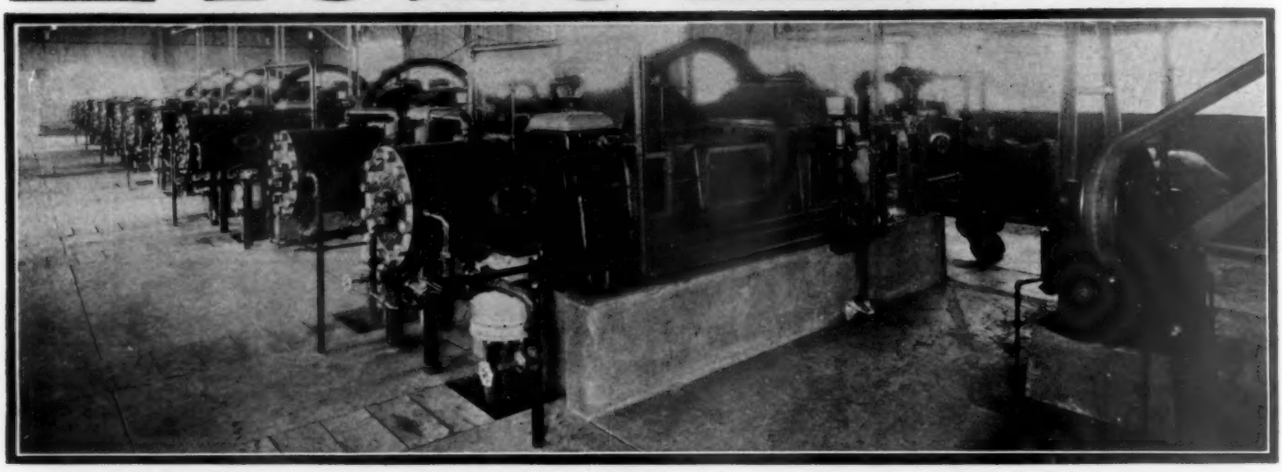
1949
1939
1929



A Battery of Bessemer Type Ten Compressors in The Magnolia Petroleum Co's Gasoline Plant at Pampa, Tex.

ON AND ON through the years you will find your Bessemers rendering that stellar service which has marked Bessemer performance for three decades.

The Bessemer you buy in 1929 will still be young in 1939 and in all probability will be a steady worker in 1949—and after! A Bessemer remains impervious to the ravages of time and service during their decades of unfaltering performance. Years of running time are built into every part, so that servicing and replacement are held at the minimum.

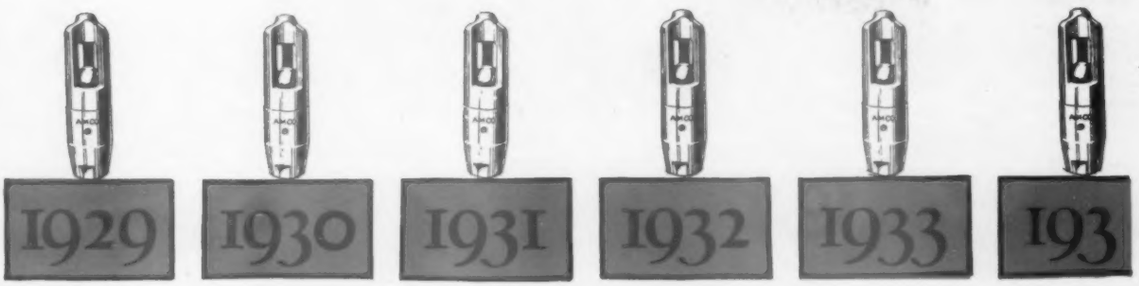
When you buy your next Oil Field Power Equipment investigate the running records of Bessemers. Their consistent 99%+ running time and their decades of on-the-job performance offer the most convincing proof of Bessemers' serviceability and investment economy.

BESSEMER ENGINE COMPANY
78 York Street ∵ Grove City, Pa.

BESSEMER

Say you saw it in The OIL WEEKLY

Tho years may pass . . . .



—any Axelson replacement installed in an Axelson Pump years hence will be an exact counterpart to the original part. Absolute accuracy in manufacture guarantees interchangeability and standardization even 'tho years may pass between production of the two parts.

Axelson Machine Company

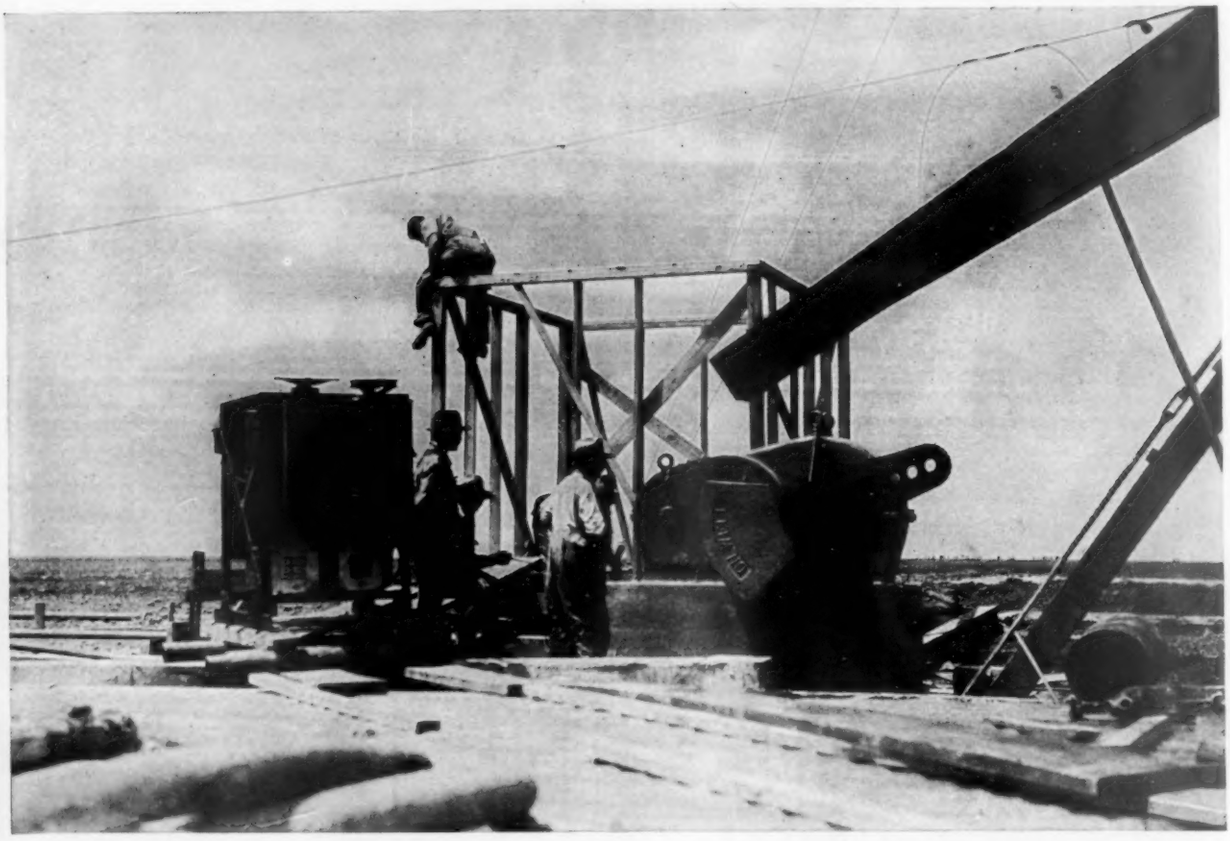
P. O. Box 337, Los Angeles
Tulsa St. Louis
New York Ci.y, 30 Church St.

Mid-Continent and Eastern Distributors:
Frick-Reid Supply Corporation

THERE IS NO ECONOMICAL SUBSTITUTE FOR QUALITY

AXELSON *Oil Well Pumps*

Say you saw it in The OIL WEEKLY



Only *one-tenth* as much space

THE only shelter you have to build when a Westinghouse-Nuttall double reduction oil well pump gear unit is installed, is an 8 x 10-foot "pup-house" to protect the motor and its controls. Contrast this with the 800 square feet of housing space needed for a standard band-wheel set-up. The savings in time, materials, and labor are immediately obvious.

This is but one of the ways in which hundreds of Westinghouse-Nuttall oil well pump gear units are enabling operators to produce more oil at less expense.

Products for the Oil Industry Include:

Arc Welding Equipment
Automatic Electric Babbitt Pots
Change House Heaters
Circuit-Breakers
Floodlight Equipment
Insulating Materials
Motor Control
Rig Lighter Sets
Safety Switches
Twin-motor Drilling Equipment
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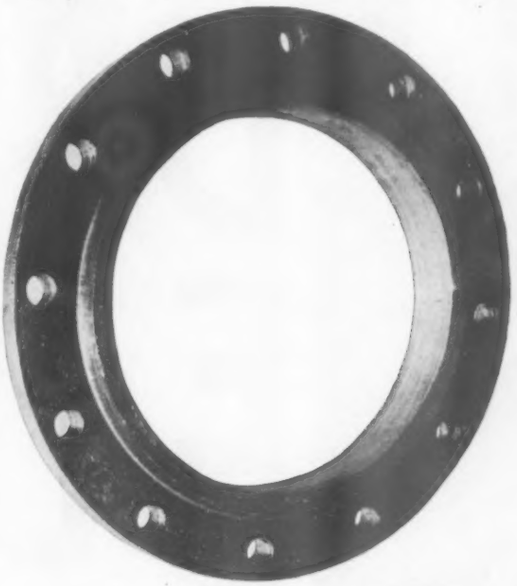

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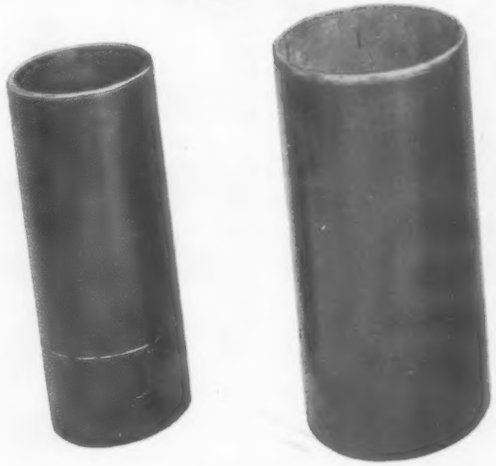

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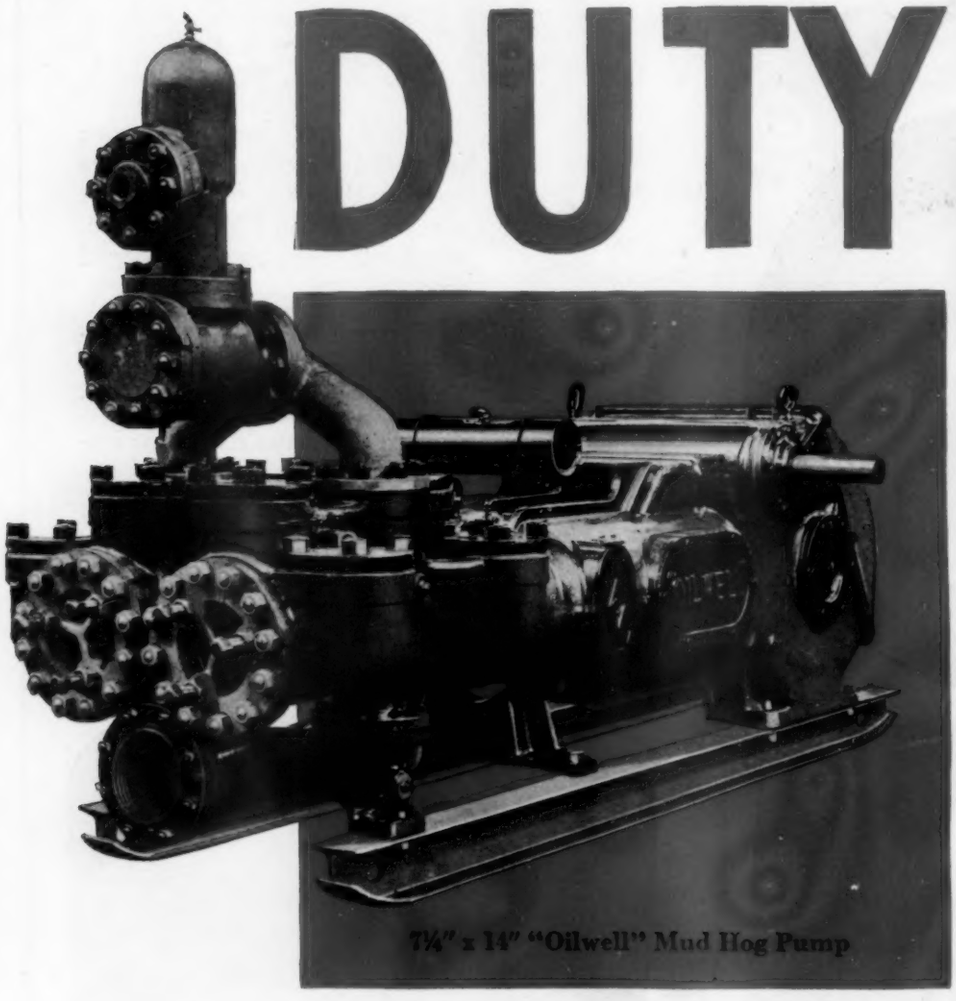

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Such features as oilbath lubrication, crank and pinion shafts mounted on roller bearings, heat treated helical gears and pinions, adjustable cross head, double piston rod stuffing box and alloy iron bifurcated water ends, make possible the greater working pressures and greater speed resulting in greater volume.

"Oilwell" pumps are made in sizes ranging from 6"x4"x6" to 14"x7¼"x18" steam driven and from 4"x6" to 7¼"x18" power driven.

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The OIL WEEKLY

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Unfavorable Outlook *Emphasized At* A. I. M. E. Meeting

Engineers sound serious note of warning against continued overproduction; point need for immediate cooperative action

By H. J. STRUTH

NEW YORK, N. Y.—One of the most constructive and inspiring meetings ever held in the interests of the petroleum industry convened during the annual meeting of the American Institute of Mining and Metallurgical Engineers, in New York, February 20 and 21. With an unusually large attendance of leading petroleum engineers and economists, these sessions were the scene of intensive and serious discussion of the immediate problems of the petroleum industry. The scope and character of the various papers presented represented the leading thought in practically every branch of the industry. Engineering, economics, production, refining and marketing were thoroughly covered from every angle by men of outstanding ability and prominence. Perhaps more than ever before, the time allotted to discussion of the various papers was more than fully utilized by serious participation of a majority of those present. In fact, so intense were the discussions that it was often difficult for the chairmen of the various sections to maintain orderly procession; at times, these discussions would become heated debates between as many as four or five men, including the author of the paper up for discussion. As may be imagined, many well-founded ideas were aired and individual opinions became crystalized in unanimous thought.

In view of past and present conditions of the petroleum industry and the fact that the immediate future outlook has prompted serious consideration of means to stabilize the situation, the sessions of the Petroleum Division of the A. I. M. E. can be said to have represented a composite picture of leading thought among the foremost experts of every branch of the industry, world-wide in scope.

Prior to the opening of the Petroleum Division meetings, an election of officers was held, at which the following were elected for the year 1929-30:

Joseph B. Umpleby, chairman;

Albert C. Rubel, associate chairman;

E. R. Lilley, secretary;

R. Van A. Mills, treasurer;

Warren A. Sinsheimer, vice-chairman for economics;

Harold C. George, vice-chairman for engineering education;

Harry H. Hill, vice-chairman for engineering research;

C. P. Watson, vice-chairman for production;

Charles V. Millikan, vice-chairman for production engineering;

Charles E. Beecher, associate vice-chairman for production engineering;

Glenn D. Robertson, associate vice-chairman for production engineering;

W. W. Scott, associate vice-chairman for production engineering;

A. D. David, vice-chairman for refinery engineering;

A. W. Ambrose, member of executive committee;

John M. Lovejoy, member of executive committee;

Earl Oliver, member of executive committee;

A. W. Peake, member of executive committee.

Petroleum Engineering Discussions

Petroleum engineering occupied an important part of these meetings. Papers were presented on a variety of subjects of paramount importance such as Underground Surveys of Oil Wells; Value of Well Surveys in Subsurface Correlation; Analysis of Waters of the Salt Creek Field; Core Studies; Well Spacing; Shutting in Offset Wells; Repressuring; and Engineering Education.

At a special session devoted to petroleum engineering education, Professor L. C. Uren stated his reasons for believing that the petroleum industry is really under-engineered. He cited facts which intimated that the majority of the oil companies are spending less than two per cent. of their gross operating expenses on engineering salaries, and about as much for engineering research. He said that he had obtained reliable data from a great many of the large companies and in only one case found that as much as six per cent. of one company's gross operating expenses represented engineering salaries. He estimated that the entire industry was spending about a half million dollars a year for petroleum research. He advanced the theory that it was profitable for the oil companies to employ engineers and that the entire industry has a far greater need for technically trained men to direct its destinies.

In the discussion following Professor Uren's talk, several prominent operating officials presented their opinions and cited examples of how their companies regard the value of the engineer. John R. Suman, of the Humble Oil & Refining Company, Houston, summed up his observations and experiences regarding the need for engi-

neers by stating that his company believed in the engineer as an investment, but the first thing they do when they hire an engineer is to tell him to forget the fact that he went to college and put him out in the field as a member of the drilling crew and give him an opportunity to show his ability, not only as an engineer but as a man who can get along with other men on the job. He said that there is immediate and urgent need for better education in English among present-day engineers; stating that most of them, while they are well ground in engineering principles, show an utter lack of ability to use proper English in the preparation of field reports; some of the most unintelligible of which are prepared by engineers. The concensus of opinion was that the petroleum industry is not over-engineered but is decidedly in need of many more men equipped with academic backgrounds who need only the practical experience to fit them for the highest positions that the industry has to offer. In line with this thought, it was also stated by Dr. George Otis Smith, at the annual banquet of the Institute, that what all American industry needs is a background of engineering education. It was also pointed out, however, that engineers can be trained by practical experience and it is not always necessary to insist upon academic training.

Petroleum Economics

At the same time during which this interesting session on petroleum engineering was held, there was an equally interesting session on the subject of petroleum economics. This session, presided over by Campbell Osborn, well known economist, of Tulsa, was well attended and resulted in considerable discussion of the various papers presented. The first paper on the program was entitled "Gasoline Economics and Refinery Operation," prepared and presented by the writer. While this paper was intended to cover the refinery situation, it also presented the author's reasons for believing that the producer should give cognizance to gasoline demand as a most reliable barometer or course of equilibrium by which to parallel the course of crude production. The discussion which followed brought out some interesting points in connection with the immediate outlook for the industry as a whole during the present year. Some of those who entered the discussion advanced the opinion that the present year would prove greatly complicated by factors of overproduction in both the producing and refining branches of the industry. The writer advanced the opinion that, regardless of the outcome of proration efforts, the refiner is in a position to conduct his operations at a reasonable profit, provided that he exercises control over them. This would mean running less crude and resorting to wider utilization of cracking to produce the gasoline demand. Thus, if the refiner uses diligent care in scheduling his still runs, the producer will be obliged to carry over a larger stock of crude this year than ever before, unless he is able to keep production below the limits prescribed by the demand for gasoline.

J. Elmer Thomas, of Fort Worth, presented a most interesting paper on the relation of petroleum developments upon the market action of oil securities. He cited examples of what has been accomplished in the copper mining industry in the control of the supply of copper. He stated, however, that in the oil business we faced greater complexity than in the copper business The copper industry, according to Mr. Thomas is controlled by about 70 producers while the petroleum industry is controlled by about 700 refiners and about 70,000 producers. "That," said Mr. Thomas, "is one of the reasons why it is so difficult to bring about more stabilized conditions in the petroleum industry."

In the discussion that followed Mr. Thomas' paper, Dr. Joseph E. Pogue states that he believed the petroleum industry's chief reason for its present illness lies in over-capitalization.

Another paper of equal interest and importance was "Fuel Oil, the Safety Valve of the Petroleum Industry," by Chas. J. Deegan, Marland Oil Company. Dr. Pogue read this paper in the absence of the author and some interesting discussion developed. Mr. Deegan's paper pointed out that there is a definite relationship between total fuel oil consumption and the balance between total petroleum supply versus total petroleum demand. Mr. Shurick, a coal man present, joined in the discussions by presenting some interesting side-lights on the coal industry and its competitive phases with the petroleum industry. He stated that railroads of the country are the largest consumers of coal, using from 28 to 30 per cent. of the entire coal marketed. He stated that the advent of the oil-electric locomotive has in some cases reduced the demand for railroad coal to one-half of the former demand. He said that if oil men think their industry is in bad shape, they ought to investigate conditions in the coal industry, which is in a far worse economic condition than the petroleum industry. According to the observations of this coal man, the petroleum industry can be said to be far more aggressive than the coal industry, because the oil marketing companies are constantly widening the scope of their activities and broadening the market for petroleum products. He seemed to feel that lack of aggressive marketing practice on the part of the coal industry is reacting in favor of the oil industry.

Petroleum Supplies

The most constructive and sensational event of the entire meeting took place on Thursday evening, February 21, following the annual dinner of the Petroleum Division. While this session was opened with the presentation of papers on refining developments, a survey of world-wide petroleum supplies and the domestic crude supply, it resolved itself into an open forum of no little significance. As a matter of fact, following the presentation of papers, the discussion became so intense that the chairman advocated the dismissal of the recorder and requested that everyone present refrain from taking any notes whatsoever, in order that all who took part in the discussions would feel entirely free to express their opinions unguardedly. During this session, one of the most important and logical solutions of the industry's problems was advanced by Dr. Joseph E. Pogue, of New York. He stated that he believed the petroleum industry should have an exchange whereby it would be possible to deal in futures in marketable petroleum and its products. This, according to Dr. Pogue, offers one solution to the prevention of dumping excessive supplies of petroleum and its products on the market at a time when it is not needed. Many of those who heard Dr. Pogue's suggestion seemed to be in accord on this idea and felt that it would offer an opportunity to stabilize the oil markets of the world. Dr. Pogue also stated at this meeting that he believes the industry is over-capitalized.

Valentine A. Garfias, of Henry L. Doherty and Company, New York, presented a most interesting review of world-wide conditions, among which he stated that Venezuela appeared to be entering a period of greater stabilization and more orderly development. He seemed to be confident that the output of Venezuela crude would not exceed last year's production during 1929. This, according to Mr. Garfias, is due to rationalization there and a more cooperative spirit among the companies interested in Venezuelan oil developments. He stated that Venezuela possesses enormous potential possibilities but with proper control it will not exert an unfavorable influence upon the American crude situation. His talk covered world-wide conditions in the petroleum industry and presented constructive views that will have an important bearing upon the future of the American petroleum industry. He also regarded Russia as an enormous potential supplier of petroleum but did not regard it as a serious competitor of the United States. H. W. Camp, General Superintendent of the Empire Refineries, Inc., Tulsa, presented an interesting review of refinery developments. He pointed out that the largest single factor for the advancement of refinery practice is the pressure still, followed by the cracking process which has materially increased the recovery of gasoline from crude. He also stressed the corrosion problem, stating that it was costing the refining industry huge sums to continually replace equipment, even though some advancement has been made in attempts to reduce the corrosion problem.

"The Crude Oil Supply" was the title of a paper presented by Howard S. Bryant, of Tulsa. Mr. Bryant gave a review of conditions during 1928 and concluded by stating that this year was being looked forward to with confidence because a majority of the leaders of the industry are in favor of balancing supply with demand.

Although those present were requested to refrain from giving any information concerning the discussion of the final evening, it can be said for the benefit of the entire industry that these engineers sounded a serious warning against continued overproduction and painted a decidedly unfavorable picture of the entire situation for the present year unless immediate cooperative action is taken by the industry as a whole.

Paper Read Before A. I. M. E. New York Meeting

Means *of* Controlling Gas-Oil Ratio

By HALLAN N. MARSH and BRUCE H. ROBINSON
General Petroleum Corporation

IT is now generally recognized that to secure the greatest ultimate recovery of petroleum from a field it is necessary to maintain at all times the lowest possible ratio of gas to oil production. The numerous ways of securing low ratios are not so generally understood or practiced. To many operators, reduction of gas-oil ratio simply means "beaning back" wells, with resultant reduced production rate. This postponement of production is often considered and spoken of as "lost" production, with the result that control of gas-oil ratio is in disfavor with some operators.

Various methods are herein discussed by which gas-oil ratio may be reduced, some of which involve no curtailment of current production, while others are accompanied by an actual increase of daily production. It is further shown that in cases where rate of production is reduced to conserve gas, the indicated ultimate recovery is generally increased. Principles involved are discussed, and conclusions are illustrated by data from the operation of wells.

General Principles

The rate and ratio in which oil and gas enter a well are solely dependent, so far as the operation of that well is concerned, upon the pressures maintained in the well opposite the producing strata at various times and at various depths. The method of getting the oil out of the hole, whether by natural flow, gas lift, or pumping, has no effect upon either rate of production or ultimate recovery except through its effect upon pressures.

Oil apparently enters wells according to some such equation as the following:

$$R = KC(P_t - P_w)^n$$

Where R = rate of production.

K = well coefficient, depending upon thickness of sand and size and number of pores in the sand.

C = fluid coefficient, depending upon viscosity, surface tension, etc.

P_t = formation pressure at some point in the structure so remote from the well as not to be immediately affected by well pressure.

P_w = mean effective well pressure opposite producing strata.

N = an exponent.

This equation may also be applied to the flow of gas into a well, with suitable values of C and N. It may also be applied to the flow of either oil or gas into a well at any particular increment of depth. K is beyond the control of the operator except as it can be affected by washing, heating, deepening or other mechanical changes. C is affected by P_t and P_w, decreasing as they decrease. P_t decreases gradually during the life of the field. It may be measured by lowering a recording or maximum registering pressure gage to the bottom of the well after the well has been off production long enough to attain the general formation pressure. It is not necessarily equal to the casinghead pressure when a well is shut in, because there may be a fluid column in the well. It can not be reliably computed from fluid level if the fluid is at all gassy, because of unknown average density. P_w is usually unknown. If the producing zone is thin, and the well is flowing naturally through tubing, and the tubing is in or near the producing zone, P_w may be considered equal to casinghead pressure (plus weight of column of gas.) This is also true with a gas-lift under the same conditions if the friction drop in the gas line is negligible or is corrected for. It is true under the same conditions in a pumping well if the fluid level is at the pump, which it generally is not. If the producing zone is of considerable thickness, P_w is admittedly indefinite, but changes of P_w may be inferred from changes of R. An instrument to measure P_w while a well is producing would be of great value. Limited data indicate that N is about unity for oil but variable for gas. It is known to be unity for water in a water well.[1]

Due to different values of N for oil and gas, different values of P_w will result in different gas-oil ratios. Due to different values of P_t at different depths, and to the partial segregation of oil and gas at various depths, various vertical gradients of P_w will result in different values of the gas-oil ratio. The aim should be to find out at what levels the gas-oil ratio is high and at what levels it is low, and then to find a means of getting a high P_w opposite the former and a low P_w opposite the latter. It is common to find that gas is concentrated in the upper part of the producing zone, and oil in the lower part.

Figure 1 shows the effect of tubing depth upon vertical pressure gradient.

Selective Production

Important reductions in the average gas-oil ratio of a group of wells can be made

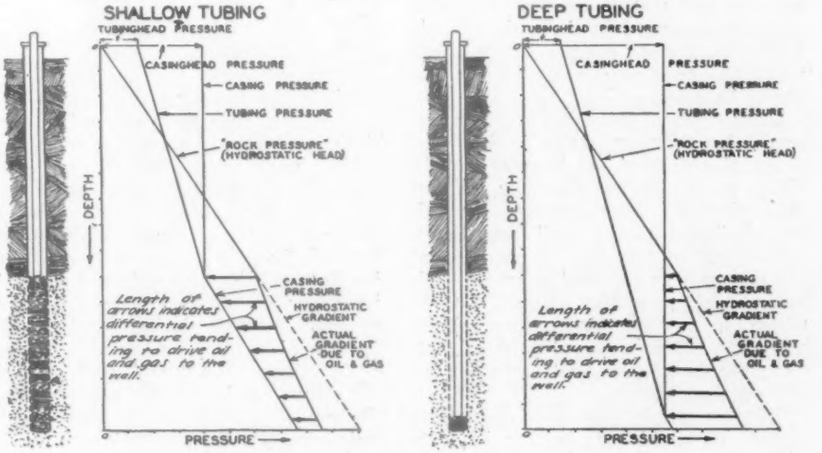

FIGURE 1

Pressure-depth curves; flowing wells with shallow tubing and with deep tubing, showing why wells with deep tubing tend to have lower ratios

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[1] C. S. Schlichter: Rate of Movement of Underground Waters, U. S. Geol. Sur. *Water-supply Paper* No. 140.

without reduction of daily production by application of what may be called selective production. This means reducing the oil production of wells where such a change is found to result in a relatively large conservation of gas, and (if desired) increasing the oil production of other wells where such increase is not accompanied by an undue increase in gas production.

It is often erroneously assumed that the ratio of gas reduction to oil reduction when a well is "pinched" will equal the previous ratio of gas production to oil production. This is only sure to be true if the well is completely shut in, in which case the ratio of reduction must equal the original ratio of producton. In the case of a well which is only partially shut in, the ratios of reduction and production are not necessarily the same, and in fact are often radically different. Likewise when the production of a well is increased, the ratio of gas increase to oil increase may be either more or less than the previous ratio of production.

In order to determine which wells to restrict and which wells to open up, tentative changes must be made unless recent changes have already established ratios of reduction or of increase. In deciding which wells to "cut," inefficient results are apt to be secured if the cuts are assigned to the wells with the highest gas-oil production ratios. The following cases illustrate this.

Well *B*-2 had a ratio of gas to oil production of 11,000 cubic feet per barrel, which while high was not excessive considering its location. As it was desired to increase the rate of production of the lease, this well was opened up. The daily oil production only increased 40 barrels, while the gas production increased 2,000,000 cubic feet, a ratio of increase of 50,000 cubic feet per barrel. To stop this waste of energy, the well was again restricted and previous conditions approximately restored.

On the contrary, well *B*-3*A* had such an excessive ratio of gas to oil production (22,500 cubic feet per barrel) that although more oil production was much desired, it was hesitantly opened up. The operator was pleasantly surprised, however, to find that this well's production could be increased in the ratio of only 6700 cubic feet of gas per barrel of oil, which was quite satisfactory for the particular location.

Many similar illustrations might be presented, but these two suffice to show that ratios of reduction and increase may be either greater or less than the ratio of production, by large amounts. Experience indicates that a well that has a certain ratio of reduction (or increase) at one time may be expected to have a similar ratio when another change is made within a few months, although these ratios can not be expected to check with any great accuracy, and in some cases are entirely inconsistent.

Selective production may sometimes consist of completely shutting in wells with extremely high ratios, and opening up other wells, whose ratios of increase are reasonable, enough to make up the amount shut in. For example, well *N*-10 had a ratio of 30,000 cubic feet per barrel. It was completely shut in, and nearby wells opened up enough to maintain the production rate of the lease at its previous level. The result was a net saving of 1,000,000 feet of gas per day. Aside from eliminating the waste of this gas, keeping it in the formation resulted in a noticeable flattening in the decline curves of adjacent wells.

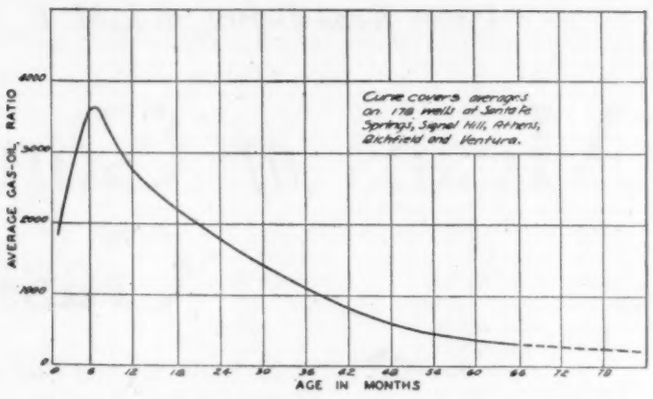
AVERAGE GAS-OIL RATIO
4000
3000
2000
1000
0
Curve covers averages on 178 wells at Santa Fe Springs, Signal Hill, Athens, Richfield and Ventura.
0 6 12 18 24 30 36 42 48 54 60 66 72 78
AGE IN MONTHS

FIGURE 2—*Gas-oil ratio; average ratio at any age of well*

Deep Tubing

The use of deep tubing appears to be one of the most promising means of conserving gas without curtailment of daily production. By deep tubing is meant tubing that extends substantially deeper than the top of the producing zone. The advantage has been shown theoretically by Figure 1, under "General Principles,' 'and will be illustrated with data from the field.

Classifying all the wells of one company that are equipped with individual gas meters as to whether their tubing is above or below the highest perforations, it is found that the wells with deep tubing have lower average ratios than wells with shallow tubing in every field studied as follows:

Field—	Average Gas-oil Ratio of Shallow Tubed Wells Per Cent.	Average Gas-oil Ratio of Deep Tubed Wells
Athens	75	
Signal Hill	52	
Santa Fe Springs . .	72	
Ventura	95	

While the preceding data appear conclusive, they may be questioned, because there is a general tendency to use deeper tubing in old wells than in new wells, and old wells generally have lower ratios than new wells (barring the period of flush production). Figure 2 shows that increasing gas-oil ratios are normal during the early life of a well, and diminishing ratios are not necessarily a proof of efficient operation during the later life. Efficiency of operation must be judged either by comparison with such an average curve, or by abrupt and prolonged changes of ratio or of the slope of the ratio curve for the particular well.

Numerous specific cases, however, confirm the conclusion that in most cases deep tubing results in lower ratios. For instance, note Figure 3, showing the history of *B*-9. This well was flowing through drill pipe (the equivalent of tubing) from a depth of 6818 feet. There was uncased hole through producing formation from 4345 to 6818 feet. The ratio was averaging 1500 cubic feet of gas per barrel of oil. Incidentally this was the deepest flow string on the lease, and the lowest gas-oil ratio.

In an attempt to increase the production of the well, most of the drill pipe was fished from the hole, and the well put back on production flowing through 4712 feet of tubing. Oil production was less than before, gas production was more, and gas-oil ratio became about 6000 cubic feet per barrel, four times what it had been with deep tubing. Mechanical conditions make lowering of tubing in this well impractical.

Well *S*-7 was pumping with tubing above the highest perforations, and its ratio was 3000 cubic feet per barrel. When put on the gas-lift, the tubing was lowered 300 feet into the producing zone, and the ratio dropped to 650 cubic feet per barrel, or about one-fifth of what it had been.

Well *N*-5 was flowing through 3750 feet of tubing, the highest perforations being at 3764 feet. The tubing was lowered to 4475 feet to conserve gas, with the following results:

Tubing	Oil, Bbl. per Day	Gas, M. Cu. Ft. per Day	Ratio, Cu. Ft. per Bbl.
Shallow . . .	111	960	8700
Deep	122	840	6900

The benefit of deep tubing is further demonstrated by Figure 4. This well had been flowing through 4261 feet of tubing, with a ratio of 3400 cubic feet per barrel, the highest perforations being at 3916 feet. This ratio was not adequate to maintain natural flow, and the well died. A compressor was installed and it was found necessary to raise the tubing to 3882 feet before the gas from the compressor would enter the tubing. With tubing at this depth the ratio became 4000 cubic feet per barrel, which was enough to maintain the flow without using the compressor.

This case also shows that whether or not there is tubing has no direct effect on gas-oil ratio so long as the tubing is above the highest perforations. The well mudded up in October, and was gotten back on production in November, flowing through the casing. The ratio was

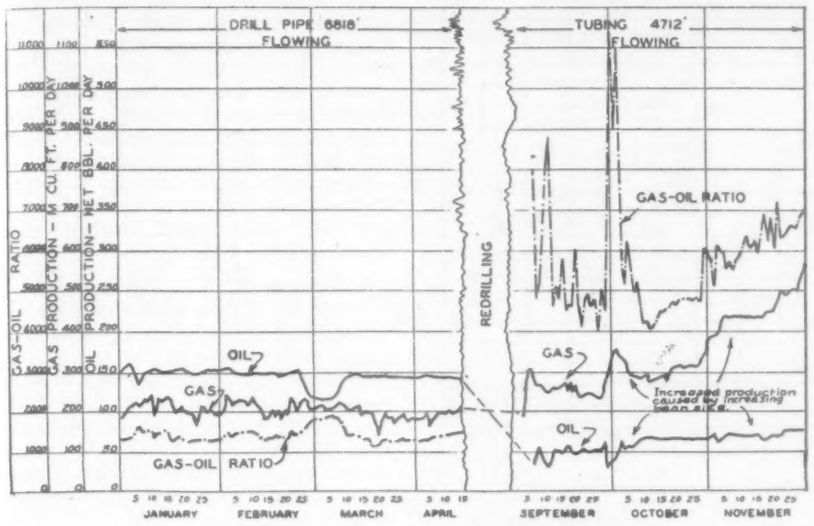

FIGURE 3—*Effect of deep tubing*

almost exactly the same as it had been with the shallow tubing.

Best Rate of Production for any Well

Data indicate that each well has some certain mean back-pressure (corresponding to a certain rate of production) at which its gas-oil ratio will be minimum. This best rate is not the same for different wells, and may not remain the same for any well over long periods of time. It is found that some wells are producing too fast, as indicated by the fact that restricting their production lowers their ratio, while other wells are producing too slowly, as increasing their production lowers their ratio. The former is more often the case on new, flowing wells, and the latter is apt to be the case with old pumping wells where improved pump efficiency will often get out more oil with less than a proportionate increase of gas.

Figure 5 shows the gas-oil ratio of a certain well as a function of its rate of production. This well has a practically constant ratio so long as the production remains constant. Within a period of a few months several changes in operation have resulted in several rates of production. The corresponding ratios are plotted against these rates. Each point represents an average production and ratio for at least two weeks. In no case was the tubing deeper than the highest perforations, so that the change in ratio is primarily the effect of change in mean back-pressure as indicated by change of production rate.

New wells tend to flow at greater than their best rate, as beaning back a new well in most of the cases observed, results in reducing its gas-oil ratio. For example, well *B*-2 had a steady ratio of 15,000 cubic feet per barrel with a production of 110 barrels per day. In the interest of gas conservation the back-pressure on this well was increased and the oil production rate reduced to 70 barrels per day. This reduced the ratio to 11,000 cubic feet per barrel.

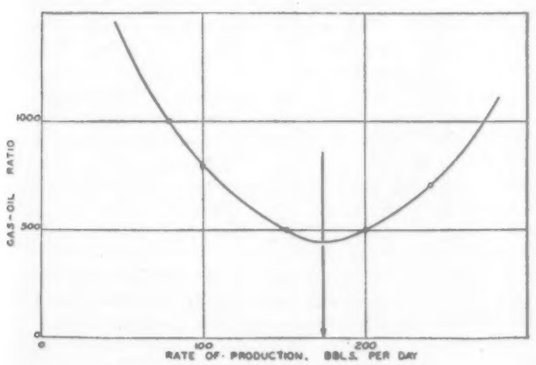

FIGURE 5—*Best rate of production*

While the preceding case is common, it is not safe to increase the back-pressure on a well and assume that the ratio will be reduced, because just the opposite may be the case. For instance, well *B*-8 had a ratio of 700 cubic feet per barrel, with a production rate of 215 barrels per day. When back-pressure was applied, and the production rate reduced to 180 barrels per day, the gas production rate was not reduced proportionately, so that the ratio mounted to 8000 cubic feet per barrel.

The real result of a change in back-pressure can not be safely judged by comparing the ratios immediately before and after the change. For instance, well *BD*-3 had a remarkably uniform ratio of 2500 cubic feet per barrel. To conserve gas, it was beaned back, with a slight reduction of production rate. Surprising as it may seem there was no change in ratio for 12 days, but at the end of this time the ratio dropped to 1600 cubic feet per barrel, at which level it continued quite steadily. As no other changes were made, this drop in ratio, although delayed, must be attributed to the increased back-pressure.

In many cases, an increase in back-pressure makes no immediate change in ratio, but a day-by-day graph of the ratio will show that the ratio had been steadily increasing up to the time of the change, and then either stopped climbing, or actually started falling off. Such a change may be just as valuable or more so than an abrupt drop in ratio after which the curve resumes its previous slope. Only by allowing plenty of time for a change in operation to take effect, and then studying a complete day-by-day chart of oil production, gas production, and gas-oil ratio, can the wisdom of that change be judged.

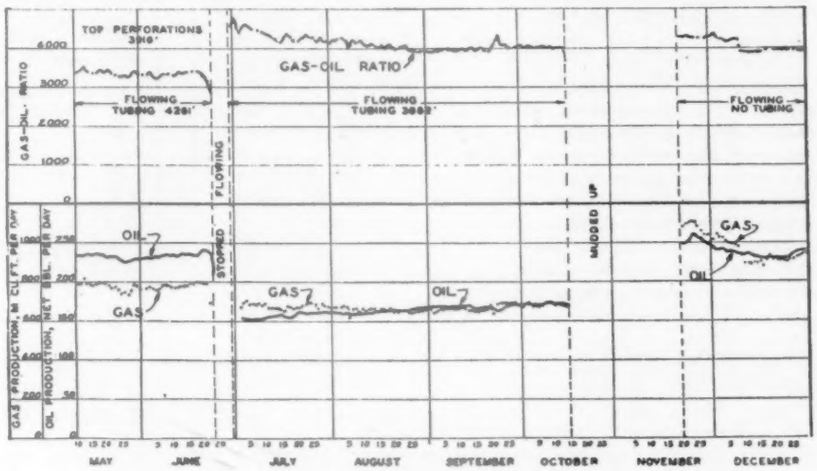

FIGURE 4—*Effect of tubing*

The gas production of some wells, especially old wells, is very little affected by changes in back-pressure, so that the installation of more efficient pumping equipment may result in substantial increases in oil production without proportional increases in gas. For instance, the gas-oil ratio of well *A*-53 varies inversely with oil production. The average production is about 100 barrels per day and the average ratio about 600 cubic feet per barrel. When the pump becomes worn and the production drops to 80 barrels per day, the ratio mounts to 700 cubic feet per barrel, and when a new pump brings the oil production up to 160 barrels per day, the ratio drops to 400 cubic feet per bar-

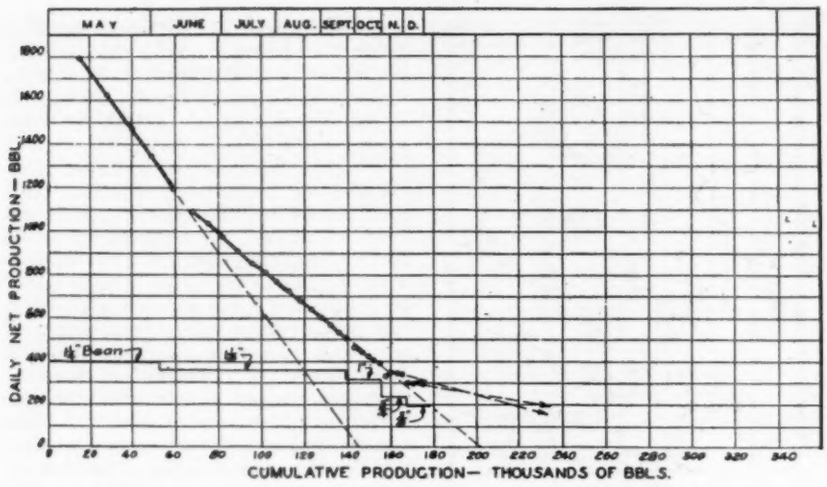

FIGURE 6—*Increasing back pressure results in increased ultimate recovery*

rel. With wells of this character, every effort should be made to keep the production rate as high as possible, because the resulting low ratio can be expected to lead to high ultimate recovery as well as high daily production. In such cases as it is found necessary to increase back-pressure to conserve gas, it is reassuring to know that the change is apt to result in substantial increases in indicated ultimate recovery, as illustrated by Figure 6.

Casing Pressure on Pumping Wells

Deep tubing is only beneficial to the extent that it results in small average pressure gradient in the well from top to bottom of the producing zone. Below the fluid level, the gradient is steep, corresponding to the density of the fluid. Above the fluid level the gradient is almost zero, corresponding to only the density of the gas. The aim, therefore, should be to get the fluid level as low as possible, and then apply whatever back pressure is desired with a gas pressure maintained on the casing.

If maximum production rate is desired, this casing pressure will be atmospheric, or may even be a vacuum. Experiments with the use of vacuum, however, have shown that application of vacuum to the casing of wells with deep tubing may result in increased rate of production, but generally causes serious increase of gas-oil ratio. It may be inferred from this that use of positive uressure on casings of such wells would result in reduced ratios.

[2]Experiments in the Use of Back Pressure on Oil Wells. Bur. Mines *Tech. Paper* No. 322 (1924).

The experience of one company indicates the general relation shown by Figure 7 for pumping wells with deep tubing. As the casing pressure is increased, the gas production declines steadily over the whole range of the experiments, but the oil production declines only slightly until a critical pressure is reached, after which it drops suddenly. The result is that the ratio has a minimum value at this critical pressure, rising on either side of it.

Experiments by T. E. Swigart and C. R. Bopp[2] lead to the same conclusions.

These observations fit in perfectly with theory. It is believed that at casing pressures below the critical the fluid level is above the pump, and as the pressure is increased the fluid level is correspondingly lowered. Pressures below the pump, where most of the oil is entering, remain almost constant, with resulting constant oil production, while pressures above the pump, where most of the gas is entering, increase. Further pressure increases, after the fluid level is depressed to the pump,

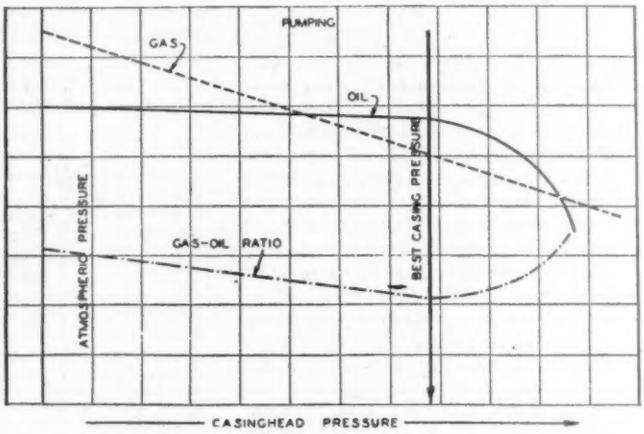

FIGURE 7

Effect of casing pressure on wells with deep tubing

cause gas to enter the pump, with resultant loss of volumetric efficiency and drop in oil production.

The aim should be to operate such wells with a casing pressure slightly less than the critical. Completely shutting in the casing will force the gas into the pump with resultant loss of capacity. Manual regulation can not be expected to give satisfactory results. What is needed is an adjustable back-pressure regulating valve.

Steady or Intermittent Production

The way in which back-pressures vary from minute to minute has a very important bearing on the gas-oil ratios of some wells. The experience of one company in California shows that intermittent operation of gas-lifts gives different results on different wells. The ratios of some wells are substantially increased by intermittent operation, while those of others are substantially decreased, and others are unchanged.

Experiments by the writers for an entirely different purpose accidentally provided interesting data on this subject. In order to save power, and reduce main-

(Continued on page 32)

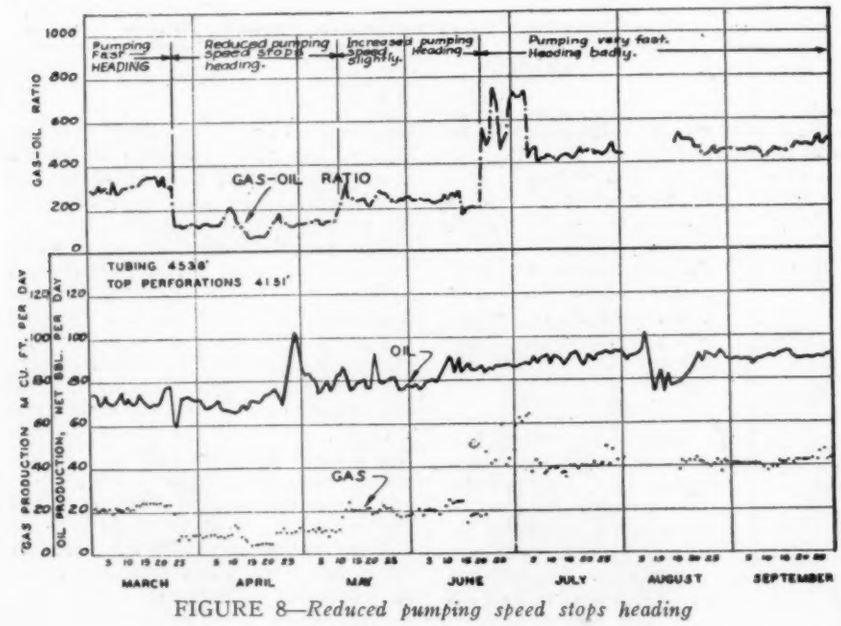

FIGURE 8—*Reduced pumping speed stops heading*

Paper Read Before A. I. M. E. New York Meeting

Fuel Oil

The Safety Valve of the Petroleum Industry

By CHAS. J. DEEGAN
Marland Oil Company

THE purpose of this paper is to point out some features of the position of fuel oil and its relationship to the economic balance and price structure of the petroleum industry. The term "fuel oil" as used in this paper includes crude used as fuel as well as refined gas oil and fuel oil. The period covered is from 1922 to date, which period may be characterized as the new normal era after the post-war inflation and deflation. In order to establish a proper perspective, the figures on consumption of the principal products of petroleum are shown below in Table I:

TABLE 1
PRINCIPAL ITEMS IN PETROLEUM CONSUMPTION
(*Thousands of Barrels per Day*)

	1922[1]	1928[1]	Increase
Fuel Oil	880	1,220	340
Gasoline	388	1,046	658
Kerosene	151	162	11
Lubricants	64	95	31
Crude Exports .	30	52	22
Refining Losses	51	80	29
Total[2] 1,564		2,655	1,091

[1]Daily average for period January to October, inclusive.
[2]Does not include wax, coke, asphalt and "other finished products."

The above table shows that fuel oil and gasoline make up the bulk of the total demand in 1928 just as they did in 1922. There has been so much comment about the enormous increase in gasoline consumption that it may come as a surprise to some people to find that fuel oil is still the largest product in point of volume at least and seems likely to hold that place for at least another year. Having established the fact that gasoline and fuel oil are by far the most important products, the remainder of this paper will deal almost entirely with these two items.

Law of Marginal Utility

It becomes necessary at this point to introduce what the economists call "The Law of Marginal Utility." This means simply that for any given article at a given price there are a certain number of people who feel that they can afford to buy the article and do so. If the price of the article can be reduced, then a larger number of people can afford to buy it and will do so. One of the best examples of this in recent years is the automobile. Everybody knows that the price of automobiles has been reduced again and again during the past 10 years. Everybody also knows that if the prices of automobiles were as high at the present time as they were 10 years ago, not nearly so many people could afford to buy them. On the other hand, some articles are so cheap that reducing prices would not increase the consumption materially because people can afford to use about all they have any need for at present prices. A good example of this would be common ordinary salt. These two examples might be called the two extremes. One of the objectives of this paper is to draw a parallel between the automobile and fuel oil on the one hand and between gasoline and salt on the other.

CHAS. J. DEEGAN

It is improbable that automobile owners or other users have ever deliberately curtailed their purchases of gasoline at any time during the past seven years on account of high prices. There have been cases of regional depression due to local industrial conditions but in such cases, it is doubtful if any more economy was practiced in gasoline consumption than in the general scale of living. On the other hand, it is just as doubtful that extremely low prices have ever stimulated consumption to any material extent. There seems to be a tendency for automobile owners to drive just about so much and the price of gasoline makes little difference. One reason for this, of course, is the fact that there is no satisfactory substitute for gasoline, at least at a lower price. But it is also true that the price of gasoline during the past seven years, even at its highest point, was never high enough to make any material difference to the people who used it. The reason is that anyone who can afford to own a car or truck and keep it running, can rather easily afford to pay the price asked for gasoline. Therefore, price had little to do with the amount sold. This of course does not apply to the sales manager who cuts the price in order to persuade a possible customer to purchase "A" company's gasoline instead of "B" company's. It does mean that in the end the combined marketing departments of the industry have sold no more gasoline than they would have sold at a somewhat higher price. We may therefore, say that the consumption of gasoline in relation to its price is somewhat parallel with the demand for salt.

The parallel between the automobile and fuel oil is easily drawn and the conditions are almost exactly the reverse of those prevailing with regard to gasoline. For transportation a man has a choice of several methods. He can walk, ride a bicycle, use a horse, street cars, railroad trains or busses. If the cost of the automobile is low enough to make its advantages over other means of transportation worth while, then he will buy it. Most of the prospective users of fuel oil can use some grade of coal, coke, tar or gas. If the

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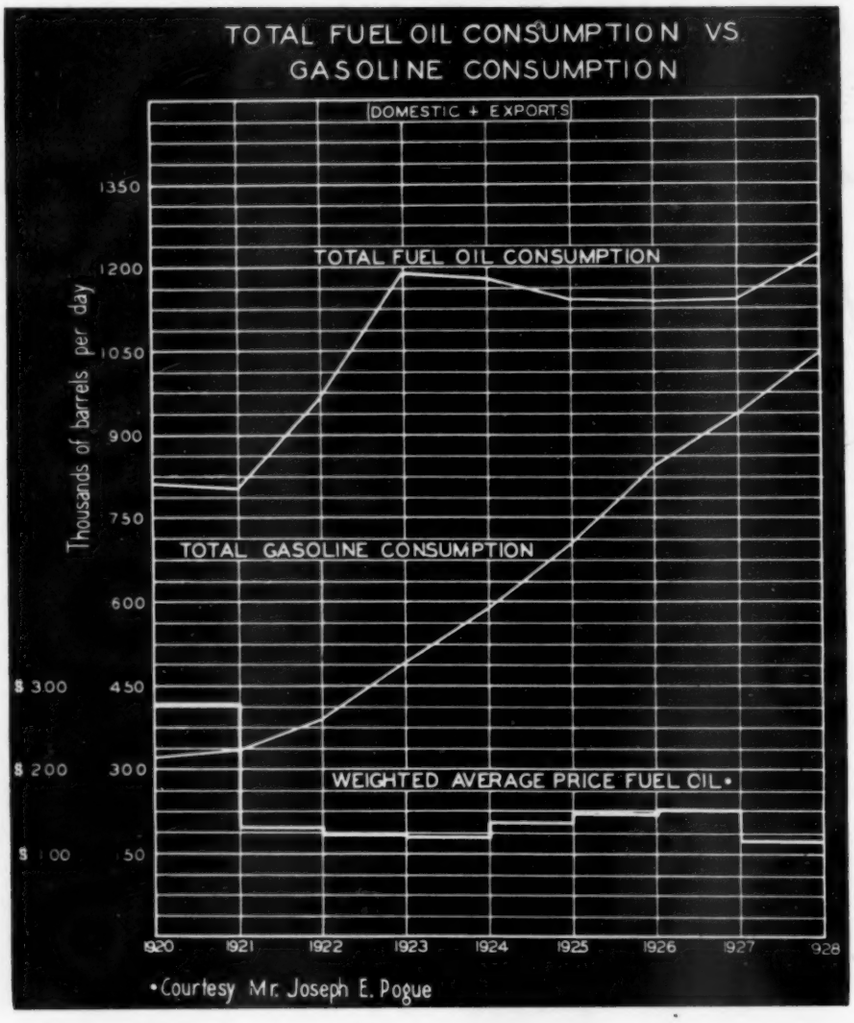


cost of fuel oil is low enough in proportion to its advantages as compared with other fuels, they will buy fuel oil.

The variety of purposes for which fuel oil is used is much greater than in the case of gasoline. The amount consumed is also greater, but unlike gasoline, fuel oil consumption can be increased considerably at any time by a reduction in price and an aggressive sales campaign. The potential market for fuels of all kinds for general heating purposes is much larger than the entire output for fuel oil. There are, however, satisfactory substitutes for these purposes in the form of coal and other fuels. The extent to which oil replaces these other fuels, depends on relative price and sales efforts. Numerous cases in the past seven years have shown that many large users of fuel have at various times changed from coal to oil and vice versa, the direction of change depending almost entirely on the relative prices of the two products. It is obvious that this means a flexible and fluctuating demand for fuel oil.

There are various uses for fuel oil in which it has marked advantages over other fuels and some in which it has practically no competition. For instance it has a distinct advantage over other fuels in marine uses, on railroads in certain parts of the country and so forth. Without going into detail, it may be said that it has a large market from year to year in which it maintains its advantages over all other fuels. This market forms the backlog of fuel oil consumption. In addition to this backlog, there is a rather large portion of fuel oil constantly going into a highly competitive market. This market is a battleground and the amount captured by fuel oil rises and falls with its price changes relative to other fuels. Chart No. I shown below illustrates the difference between the rate of growth in gasoline consumption and the rate of growth in fuel oil consumption.

Fuel Oil as Safety Valve

It will be noted that gasoline consumption follows a more or less steady trend, regardless of the general condition of the petroleum industry. The reasons for this have already been given. Fuel oil displays no such steady trend. The total consumption in general rises and falls in accordance with the amount of overproduction of crude oil in the industry. There is a definite relationship between total fuel oil consumption and the balance between total petroleum supply versus total petroleum demand. When overproduction of crude oil brings the price structure of the industry down with a crash, the low prices stimulate the consumption of fuel oil and relieve the strain. When the supply of crude oil is insufficient to meet the demand, prices go up and fuel oil is driven from a part of its highly competitive market, thereby easing the strain on the demand for crude oil. This function of fuel oil gives rise to the title of this paper—"Fuel Oil—The Safety Valve of the Petroleum Industry."

It is apparent that this safety valve does not always open as soon as it should, although it generally closes on schedule. This is probably due to the fact that this highly competitive portion of the market belongs normally to the coal industry, at least to a greater extent, than it does to the petroleum industry. Therefore, it probably requires more sales efforts and price reductions on the part of the petroleum industry than the coal industry. Hence, although a share of this market can be captured by the fuel oil marketers through vigorous exertion, at the slightest relaxation in economic pressure, it tends to revert to the coal marketers.

Price Control

The manner in which the expansion and contraction of fuel oil consumption acts as a safety valve in times of overproduction has been shown. The thing that interests most people, however, is what influence this may have on the price of crude oil and refined products. On the basis of statistics, it seems safe to assume that by and large the factor that controls crude prices and ultimately refined product prices, is the amount of crude going into or coming out of storage. The difference between an addition of one hundred thousand barrels of crude oil per day to storage and the withdrawal of the same amount, is roughly a difference of 75 cents per barrel in the price of Mid-Continent crude. It seems obvious therefore, that prices and profits in the petroleum industry depend very largely on the volume of a relatively small surplus or shortage in supply. Since we are assuming that gasoline demand at any given time is practically fixed regardless of price, then the burden of absorbing a surplus of production or reducing a shortage, falls inevitably on fuel oil. Since we have seen that it seldom fails to react quickly to a shortage of crude oil, it is obvious that its effect in times of overproduction depends on how much of the surplus it can absorb and how quickly it can do so.

It seems to have dawned on the refiners as a group in 1928 that there was no necessity for their suffering because of the sins of the producers. The year 1928 has therefore witnessed a paradox. Despite overproduction of crude, gasoline production has been held slightly below demand and stocks reduced. The result has been a price for gasoline that afforded a slight

margin of profit. Fuel oil prices on the other hand were reduced greatly in order to expand the market and lighten the storage burden. But with cheap fuel oil and slight profit in gasoline, there has been a constant temptation to reduce runs of fresh crude and expand cracking operations. Up to October, it must be said that the temptation has been marvelously resisted for the percentage yield from crude has been practically normal or even slightly below.

Of course, if the temptation should become too strong and a large group of refiners yield, the profit would be only temporary and chaos would soon result. Such action would react on the delicately balanced price structure in two ways. The reduced demand for crude would soon result in another price cut and further demoralization in the ranks of the producers. On the other hand, the increased demand for fuel oil for cracking would tend to increase prices and allow coal to drive it from a portion of its present market. This would reduce the total demand for petroleum products, which would reflect back on the price of crude oil and also all refined products. Then we would have 1927 all over again. It is to be hoped that the refiners will realize that so long as they can refrain from yielding to the temptation of cheap fuel oil, just so long and no longer can they hope to keep their delicately balanced price structure and continue to eke out a bit of profit from operations.

Fuel Oil and Conservation

Having considered the part played by fuel oil in the past and current history of the industry, it seems desirable to attempt to look into the future. We have heard considerable criticism in the past few years about the economic waste in burning oil for fuel in places where coal or some other fuel would serve the same purpose. It would be folly of the rankest kind to ignore the rising tide of public opinion about conservation. It is a movement of too vast proportions and in many cases well founded. Conservation applies to other industries as well as the petroleum and is gradually becoming a national shibboleth. Since we cannot ignore it, we must use a little common sense in considering its application. There is no true conservation in wrecking the economic foundations of an existing major industry, because of a vague and nebulous idea as to the needs of future generations. The use of fuel oil in industries where coal would serve is not going to be stopped in sudden and ruthless fashion by legislative fiat in the name of conservation. It is going to cease gradually as the result of economic law operating through a variety of channels. True conservation consists of the most complete utilization of a given amount of a commodity in the satisfaction of human needs.

There are at least two factors which are going to seriously affect the future of fuel oil and tend to bring about true conservation. These two factors may develop simultaneously or one may cause the other to develop. The one factor that is sure to come in ever increasing efficiency on the part of the coal industry. At present, the coal industry is attacking its problem along two lines simultaneously. One line is a study of ways and means to increase the efficiency of utilization of coal in its present channels of consumption. We may rest assured that the coal men will find ways and means of making efficient heat units cost their customers less money. The other line is a scientific study to find new uses for coal. We may be equally certain that the time and effort now being devoted by internationally known scientists will bear fruit and that many new products and uses will be developed for coal. These new uses and by-products will probably act as by-products usually do, reduce the cost of the main product and likewise its sale price.

The other factor that will tend to bring conservation is simply a parallel development by the petroleum industry with regard to fuel oil, aided and assisted by developments in the internal combustion engine. We also must aid our customers to obtain efficient heat units at a lower cost, and at the same time we must put our scientists to work to find and develop those myriad by-products which they claim it is theoretically possible to make from petroleum. In our case, we shall inevitably find that in certain fields we can obtain such a great advantage over coal that it will pay us to concentrate our efforts on enlarging these markets, gradually abandoning those in which our margin of superiority over coal is so small that a very slight change in relative prices will wipe it out.

Effect of New Inventions

As an example of future possibilities, consider recent developments in the diesel engine. The Packard Motor Company has on the verge of commercial success, a diesel engine, weighing only about three pounds per horsepower. This engine is being used experimentally in an airplane. For fuel the company claims to have successfully used a product as low as 26 gravity fuel oil, although for the most part, a distillate of somewhat higher gravity has been employed. It takes little imagination to see that if a diesel engine satisfactory for airplanes can be developed, it can also be used in automobiles. On the other hand, certain oil companies are now putting on the market a pure, stabilized casinghead or natural gasoline, both for automobile and airplane use, for which they claim certain superior properties. The question then arises—What is the future motor fuel going to be?

It is a peculiar characteristic of many new inventions that they seldom drive out the old order altogether. Thus we still have steam engines working away merrily in spite of our internal combustion engines and electric motors. If this condition continues to hold true, we can look into that not too distant future and see our refineries turning out, not two or three grades of gasoline and perhaps one or two diesel oil; but rather a whole gamut of motor fuels for all kinds of internal combustion engines, ranging from the lightest gasoline to a rather heavy distillate, well down into the fuel oil cut. In addition to these conditions, we shall have been forced into chemical research for new products and will undoubtedly have found them. Se we shall also be turning out quite a varied group of chemical by-products. It looks as though the future refinery is going to be a very complicated factory and we ought to have a little sympathy for those who are going to have to work out the complicated price structure of that not too distant future.

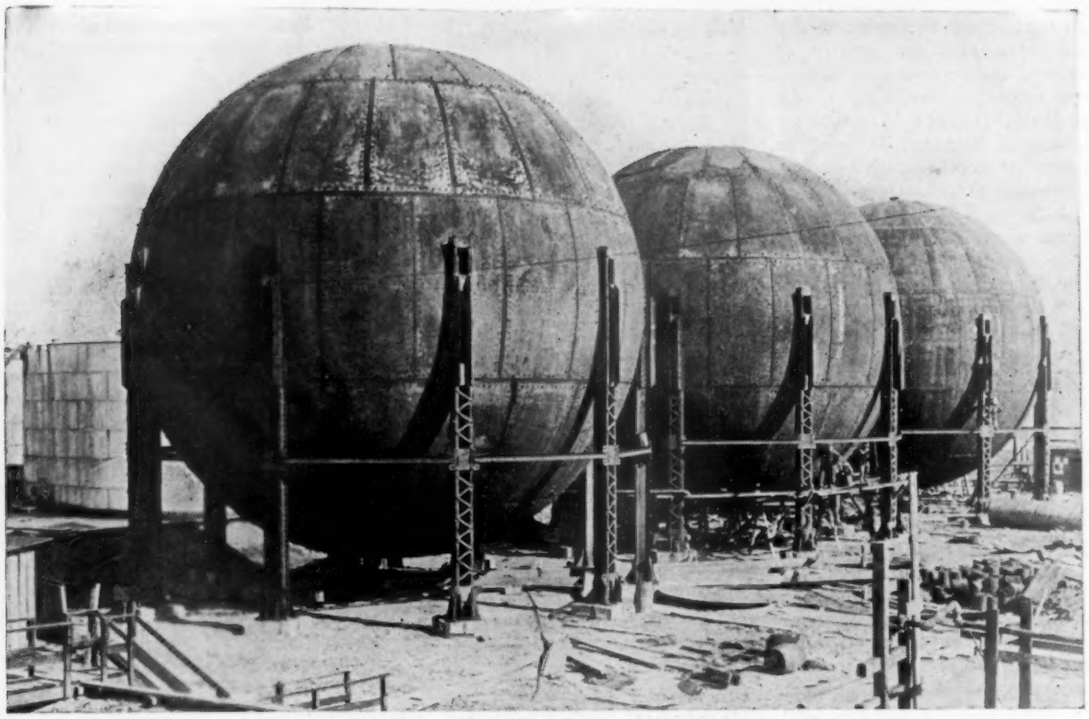
Recommendations

No paper is complete without a list of recommendations of the things to be done by the patient if he is to survive. This paper will violate no sacred precedents. Our recommendations will be few and we hope, brief, but in the vernacular—"they take in a lot of territory."

1. We urgently recommend to the refiners that they consider carefully their present delicately balanced price structure and gird themselves against the temptation to flood the market with gasoline from cheap fuel oil.

2. We urge the industry to realize that curbing overproduction by artificial means is only the first step. It should be obvious by this time that mere proration and shut down agreements can only result in a constantly mounting potential production held back. It is like a dam which must be constantly built higher and higher because the average inflow exceeds the average outlet. Therefore, pro-ration inevitably calls for a supplementary action toward developing new markets and increasing consumption.

3. The work to increase consumption should be divided into two parts; First—intensive analysis of present markets for possibilities of expansion, also a study of possible new uses for present products; second—research for new products from petroleum and particularly from the fuel oil fraction. Our present research expenditures seem to be directed entirely toward increasing the supply of crude oil and the yield of gasoline. These expenditures result only in adding to the burden of overproduction and further breaking of the price structure. We have heard the plea that the saturated chain hydrocarbons of petroleum are much more difficult to alter than the ring type hydro-carbons of coal. We cannot help thinking that if some of the millions spent on geophysics, gas lift and cracking processes had been spent on research for new products, that perhaps the saturated hydro-carbons might not be considered so difficult to alter.



Hortonspheres for Volatile Liquid and Gas Storage

Factors Involved in Lessening Evaporation Losses

By H. L. KAUFFMAN

TO ELIMINATE entirely evaporation losses in the storage of oil is almost an impracticability; for, in trying to save the last fraction of a per cent, it is possible to spend more money on an elaborate recovery system than the saving will justify. How far one can go economically in reducing evaporation losses in oil storage is a separate problem for each owner of tankage. To present briefly and concisely the causes of evaporation and methods in use for its control, so that the owner of oil in storage better can determine what will be the best means to employ in his particular case to keep evaporation losses at a minimum, is the purpose of this article.

The three fundamental factors that control the evaporation of oil are as follows:

1. The area of oil surface exposed.
2. The amount of unsaturated air passing over that surface.
3. The degree to which the air becomes saturated with gasoline before leaving the tank.

The unsaturated air passing over the surface of the oil comes from two sources, namely:

1. Windage.
2. Breathing.

The factors on which windage depend may be listed as follows:

1. Tightness of the roof and fittings.
2. Number and location of vents.
3. Breather valves on the vents.

The factors that control breathing are:

1. Volume of vapor space.
2. Degree and frequency of temperature variations in vapor space.
3. Pressure at which valves are set.
4. Degree of saturation of air inhaled (where it enters wholly, or in part, from some type of gasholder).

The degree to which the air becomes saturated depends upon the following three factors:

1. Vapor pressure of the oil.
2. Temperature of the oil at the surface.
3. Time that the air is left in the tank. This is important only in tanks that are worked frequently.

From a study of the above fundamental causes of evaporation and of the factors affecting these causes, it is found that there are certain conditions that, if practical, it would be desired to obtain in storing oil, namely:

1. Minimum surface of oil exposed.
2. Gas-tight roof and roof fittings.
3. Breather valve on vent.
4. Minimum vapor space.
5. Minimum temperature variations in vapor space.
6. Roof capable of holding maximum pressure.
7. Returning of exhaled gases to tank.
8. Minimum temperature of oil at surface.

Means for Reducing Evaporation Losses

Means for reducing evaporation losses from storage tanks may be divided into four groups:

1. Means for preventing temperature changes inside of the tank.
2. Means for preventing the renewal of the atmosphere above the oil in the tank.
3. Means for preventing communication between the oil and the air.

4. Means for the abolition of atmosphere in the tank.

More specifically, but without any attempt to place each in a division in the order outlined above, these means may be further listed as follows:

1. Use of floating roofs.
2. Use of breather roofs.
3. Use of a floating seal of foam.
4. Use of Fleming vaporless storage tank.
5. Use of gas-tight tanks.
6. Use of lower roof-pitch.
7. Use of Water-top tanks.
8. Spraying water on roof.
9. Use of insulated roof.
10. Use of pressure tanks.
11. Use of gasometer and breather bags.
12. Use of vacuum and gasoline-recovery systems.
13. Use of aluminum and other heat-reflecting paints for painting tanks.

Floating Roofs

The use of the floating roof purposes to do away with the tank atmosphere entirely. The roof floats upon the oil and rises or falls as the tank is filled or emptied. The floating roof is kept in contact with the side walls by the use of flexible, gas-tight material.

Breather Roofs

A relatively new device is the "breather roof" which, on a tank, gives a combination of an oil tank and a gas-holder in a single structure. The breather roof presents a gas-tight structure that provides a variable volume for the air-vapor mixture in the tank. It permits an air-vapor mixture to form above the oil in a tank and then serves to hold that mixture intact. The framing that supports the breather roof is designed so that the roof slopes downward from the top of the tank shell and forms an inverted frustrum of a cone. On an 80,000-barrel tank the outer edge of the roof slopes downward about eight inches in the first 20 feet, while the remainder is almost flat. The roof-plates are welded together in such a manner that they form a great diaphragm welded firmly to the angle at the top of the tank-shell. This diaphragm is not fastened to the roof-framing at any point, but rests upon it when in the down position. When the tank is being filled, the air in the tank is vented through a volume relief-valve in the roof. As soon as the tank is full, the breather eliminates any further exit of air or vapor. The roof rests on the supporting framework and is in its lowest position when the air-vapor mixture inside the tank is the coolest (which is at night). As the temperature increases, the air-vapor mixture expands. Instead of a portion of it being forced out of the tank, the roof rises enough to provide the increase in volume required. All the mixture is held inside the tank.

"Sealite"

"Sealite" is the trade name given to a chemical mixture that forms a floating seal of foam over the oil. Its use has not proved fully satisfactory because of difficulty in getting a foam of such stability that it will not be destroyed by the oil or moisture, and in preventing it from getting into lines, pumps, etc.

Fleming Vaporless Tank

This tank is so constructed that there is no vapor space, the surface of the oil being protected by a simple inverted water-seal, which prevents all access of air but allows expanson and contraction of the oil without any moving parts. The full advantages of this tank are only available when the tank is filled to capacity, for when it is partly empty it is no better than an ordinary water-top tank.

The so-called gas-tight tanks are constructed so as to secure a minimum of gas and air movement between the plates in the roof and around hatches, manholes and thief-holes. To accomplish this, devices have been provided that permit the equalization of pressure within the tank with those on the outside. This has resulted in the use of long pipe-vents, of deadweight valves, of liquid-seal valves and pressure-valves in vent-lines. Such devices permit the escape of gas during the hot portions of the day when pressures are built up inside of the tank and the entrance of air at night to build up the decreased pressure caused by cooling.

Lower Roof-Pitch

Modern tanks are being built with a much lower roof-pitch than formerly. A slope of one-half inch to one foot is sufficient adequately to drain the roof, and there is no good reason for building tanks of any higher pitch. Minimum vapor space in a tank is conducive to lower evaporation losses, since, with other conditions fixed, the amount of tank-breathing is almost directly proportional to the vapor space in the tank.

Water-Top Tanks

Water-top tanks show a low evaporation loss when kept well-filled and especially when the vents are protected by breather valves. Mechanical difficulties and expenses both in first cost and maintenance lessen their more extensive use. Another objection is the fact, in case of an explosion, the shell gives away instead of the roof with serious consequences.

Water sprayed over the roof will also reduce the temperature of the vapor in the tank. However, few storage farms have water available for such purposes. Where a plentiful supply of water is available it is usually sea water, which "eats out" the roofs very rapidly. It is self-evident that a leaky roof is much worse than a hot one.

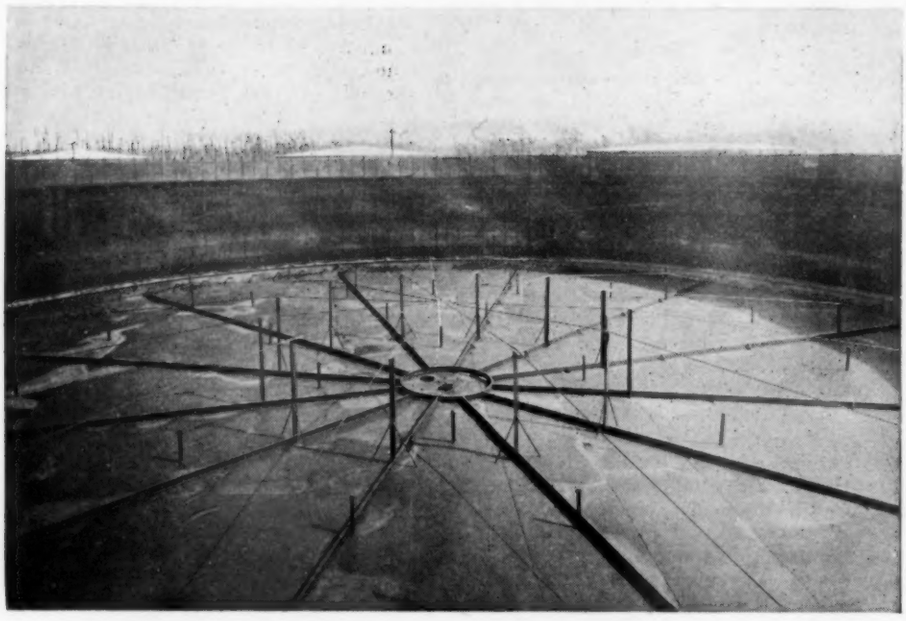
Tanks equipped with Oceco Vent Units, including flame arrestors

Insulated Roofs

Insulating the roof alone is much more practicable than insulating the whole tank. The insulated roof keeps the vapor space cooler in the day-time and tends to maintain the same tank temperature at night. The insulated roof in addition to reducing greatly tank breathing also eliminates windage, which latter is an important factor in lessening evaporation losses.

Pressure Tanks

Storing volatile liquids in pressure tanks tends to eliminate evaporation entirely. Spherical tanks (Horton-spheres) for storage of casinghead gasoline are good examples of such pressure tanks. However, such tanks are high-priced containers and are



Wiggins Floating Roof on 55,000-barrel tank

limited to comparatively-small sizes, most of them being not over 10,000-barrels' capacity.

Gasometer and Breathing Bags

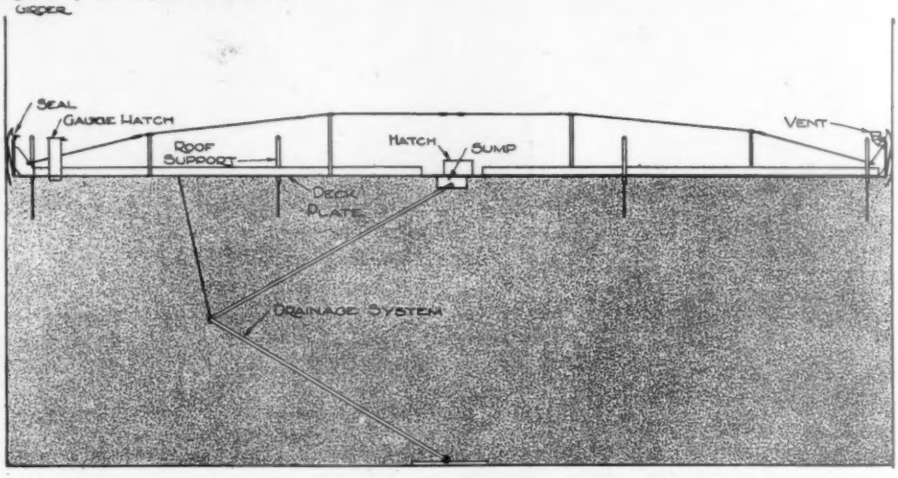
A number of installations have been made where tanks were allowed to breathe in and out of a gas-holder (gasometer) and, if there are no leaks in the system, naturally there is no evaporation loss. However, the use of a gasometer is not very economical, due to the fact that it is very difficult to prevent leakage of gas; further, the first cost is extremely high. A modification of this system, using fabric gasbags for gasometers, recently has been developed. These bags are located close to the tanks, each bag serving from one to four tanks. Cost of piping is reduced by the use of gas-bags, and the whole system is much cheaper than when a steel gas-holder is employed.

Vacuum on Tanks

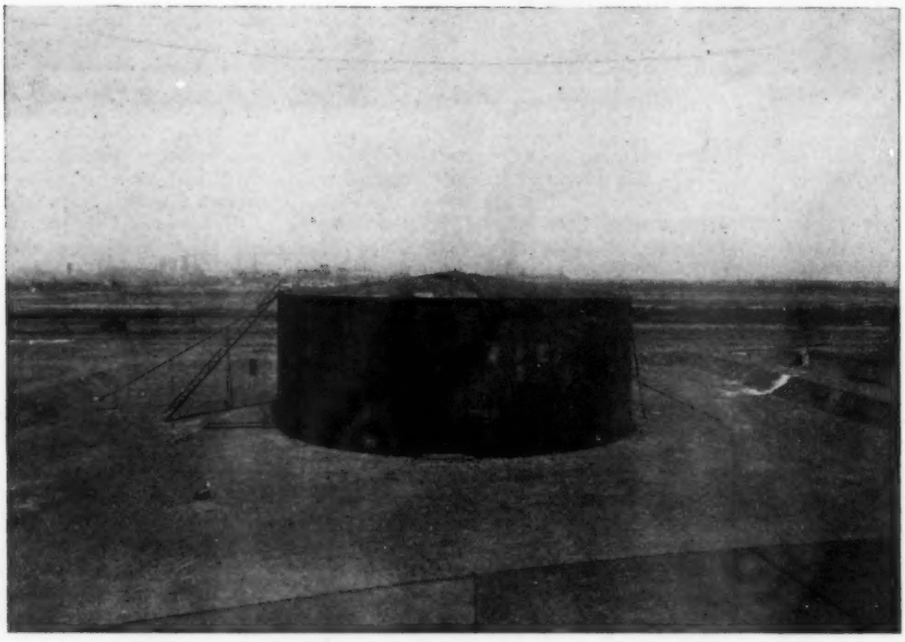
Application of a silent vacuum to a tank is based on the economy of removing volatile vapors from the tank as soon as they form, and thereafter recovering the gasoline from the vapors in a gasoline recovery plant. Whether or not so doing is advisable is a problem to be solved for each individual case.

Heat-Reflecting Paints

Painting tanks with a light-colored, heat-reflecting paint, such as aluminum paint of good grade, is advisable as a means of reducing evaporation losses. If the under side of the tank-roof can be painted at a reasonable cost, this will also help further to reduce evaporation by lessening the amount of heat absorbed by the oil and vapors from the roof.



Cross section showing tank with Wiggins Floating Roof



Typical Oil Storage Tank—Note breather pipe leading off from tank

Summary

The most important factors involved in lessening evaporation losses from oil-storage tanks consists:

1. In reducing vapor space to a minimum.
   (a) By the use of low-pitched roofs.
   (b) By keeping the tank well-filled.
2. In making the roof and roof-fittings gas tight.
3. In equipping the vents with an effective breather valve.

These three fundamentals may then be supplemented by insulation, high-pressure roofs, gas-holders, tanks of special shape, etc. The extent of the means used in reducing evaporation losses depends entirely upon the local conditions prevailing in each case; the savings attained with any given type of installation will determine the justifiable expenditure.

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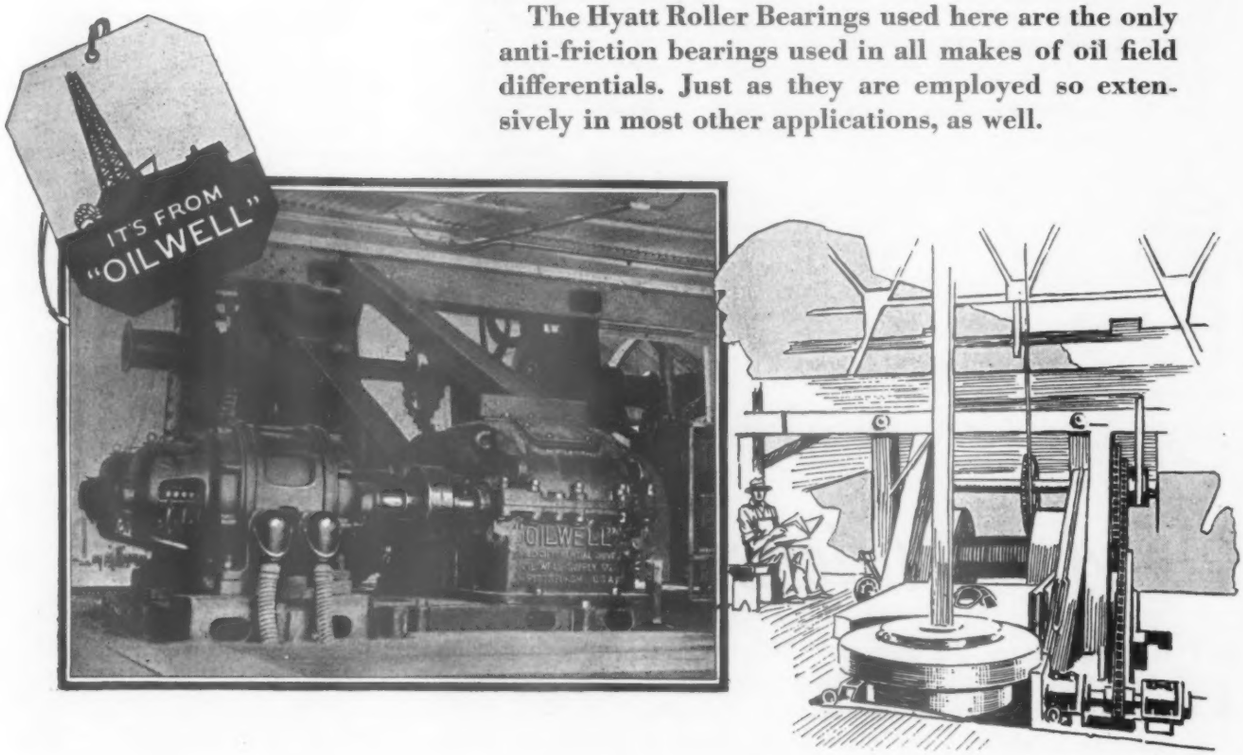

The Hyatt equipped "Oilwell" Hild Differential Drives (Licensed by Haliburton), are built by the Nuttall Works, Westinghouse Electric & Mfg. Co., Pittsburgh, and sold by Oil Well Supply Co., Pittsburgh, and all their branch stores throughout the oil fields.

Because sturdy Hyatts stand up under the sudden shocks and top speed pressure of 24-hour drilling . . . the steady grind of rotaries . . . the speed and vibration of reverse clutches . . . the day in and day out demands of pumping units, rigs and all other equipment, they are the preferred bearing for this service.

Most leading builders furnish Hyatt protection because they know it means longer lived, stronger built, money saving oil well equipment.

HYATT ROLLER BEARING COMPANY

Newark Detroit Chicago Pittsburgh Oakland

HYATT

ROLLER BEARINGS

PRODUCT OF GENERAL MOTORS

Means of Controlling Gas-Oil Ratio

(Continued from page 24)

tenance on equipment, the pumping speed of well *S*-43 was reduced from 24 to 16 strokes per minute. There was no substantial change in oil production rate, but the well which had previously been producing intermittently due to "pumping off" and "heading," produced steadily, with the result that the gas-oil ratio dropped to one-third of what it had been. (Figure 8.) In later attempts to increase production rate the well was progressively speeded up, with corresponding reversions to heading and high ratio.

Morgan Walker[3] reports that intermittent operation of gas-lifts results in higher net gas-oil ratios, as shown by the following data quoted from his paper.

Well	Net Gas-oil Ratio, Cu. Ft. per Bbl. Continuous Flow	Intermittent Flow
Anderson 2	228	773
Cowden 4	207	613
Nitoy 3	65	232
Nitoy 2	292	282
Fixico 3	75	1660
Routie 3	514	745
Killingsworth 3 ..	367	932
Cowden 3	391	2180

These data are tentatively accepted not only because of the absence of published conflicting data, but because they so nicely explain the accepted fact that intermittent operation of gas-lifts requires less circulated gas than steady operation.

The effect of intermittent production (variable back-pressure) is not well understood from a theoretical standpoint, and experimental data are very meager. The subject is of enough importance to warrant research.

Negative Gas-Oil Ratio

While really a special case of the use of deep tubing, the subject of negative gas-oil ratio is of sufficient importance to merit separate discussion. Negative net gas-oil ratio can be accrued in some cases by operating a gas-lift or pumping well in such a way that more gas is pumped into the well with the compressor than comes out. This may be considered as repressuring or gas injection, with the same well used simultaneously for injecting gas and producing oil.

Referring to Figure 1, the theoretical possibility of negative ratios may be seen. If, in the right-hand figure, showing pressure relations for deep tubing, the casing pressure be sufficiently increased, the line representing that pressure will be moved to the right until it intersects the line marked "actual gradient (in structure) due to oil and gas." The arrows or vectors representing differential pressure will then point to the right or away from the well in the upper part of the (previously) producing zone, and to the left, or toward the well in the lower part of the zone. This mans that with the fluid level at or below the level of zero differential (where the direction of the vectors reverses) there will be gas flowing out of the well into the structure above the level of zero differential, and oil and gas entering the hole near the bottom. If pressures are correctly adjusted, the outflow of gas may be greater than the inflow and the inflow of oil greater than the outflow (if any).

This condition was attained in well *S*-5 with the gas-lift. The highest perforations are at 3715 feet. With tubing at 3701 feet, the net gas-oil ratio was +370 cubic feet per barrel. Tubing was lowered to 3753 feet, which resulted in lowering the net ratio to almost exactly zero. Tubing was further lowered to 3791 feet, and gas-oil ratio dropped —275 cubic feet per barrel.

The writers are indebted to the executives of the General Petroleum Corporation for approval to prepare and publish this paper. So many excellent articles have been written on the general topic of ultimate recovery and gas-oil ratio that even a list of all those from which ideas or supporting data have been drawn would be unduly long. They are, however, gratefully acknowledged.

[3] M. Walker: Intermittent Injection of Gas in Gas-lift Installations. A. I. M. E. *Tech. Pub.* No. 146 (Oct., 1928).

An Understanding President

IT is fortunate for the Petroleum Industry that Herbert Hoover shortly will become president of the United States. Few men can match the incoming chief executive in ability to weigh economic problems solely in economic scales. The next president is also a mining engineer and a former member of the Federal Oil Conservation Board.

His scientific training stamps him as qualified to judge that phase of petroleum properly. His contacts on the Federal Oil Conservation Board and his association with the United States Bureau of Mines have given him recent experience with oil.

His coming position in the White House is timely, since the Petroleum Industry is shortly to take a combination of scientific and economic problems to Washington for legislative consideration. The next congress will be asked to so alter the Sherman anti-trust law that, with the consent of the Federal Oil Conservation Board, oil producers may combine to hold the output of an oil field within a given limit. As Secretary of the Department of Commerce, Hoover recommended such a step.

The experience of the Petroleum Industry has been such as to justify some fear in taking its problems before congress. Federal lawmakers seem to be especially adept at making a political football of oil on scant provocation.

With a man of the Hoover type as president, the proper time seems to have arrived for fair consideration at Washington.

Science, expressed in deeper drilling, production by the gas-lift and by cracking in the refining division, has saddled an economic problem on the Petroleum Industry. These and other developments, chiefly geophysical instruments, have combined to present the world gasoline faster than it is being consumed.

So the Petroleum Industry must now take an economic problem before congress. It deserves to be treated purely as an economic problem. But the halls of congress will not ring true to history if men do not arise to decry the exorbitant prices of gasoline and the oppression of men whose capital is small.

But from the next chief executive the Petroleum Industry will have its problems weighed strictly on their merit. The political issue may bear heavily in some quarters but Herbert Hoover has the training and the experience to segregate the true issues from the rantings of the demagogue.

Furthermore his reputation leaves no doubt that he will do that.

Warning may be out of place. Still it is well to remember that only the scientific and economic phases of the issue should be presented by the Petroleum Industry. There have been efforts in the past to match politics with politics. Now the pleas of the Petroleum Industry can be made on their true merit, for the man who will hold the veto pen will judge on merit only.

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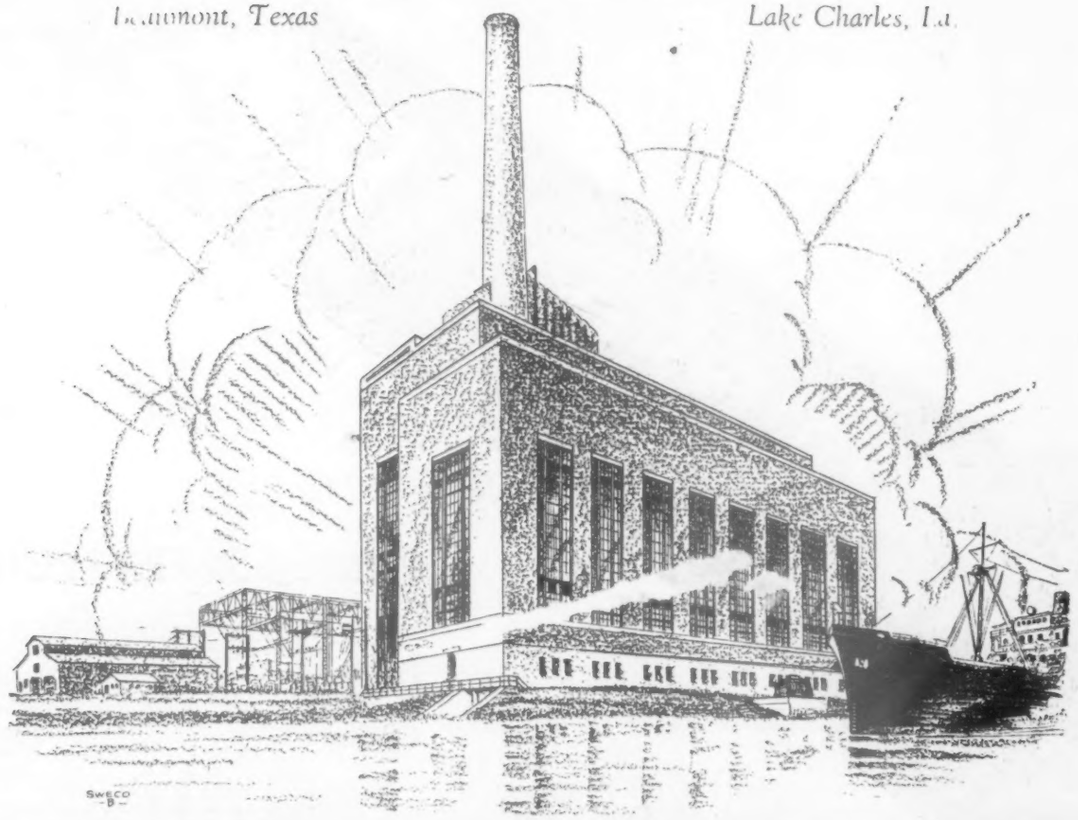

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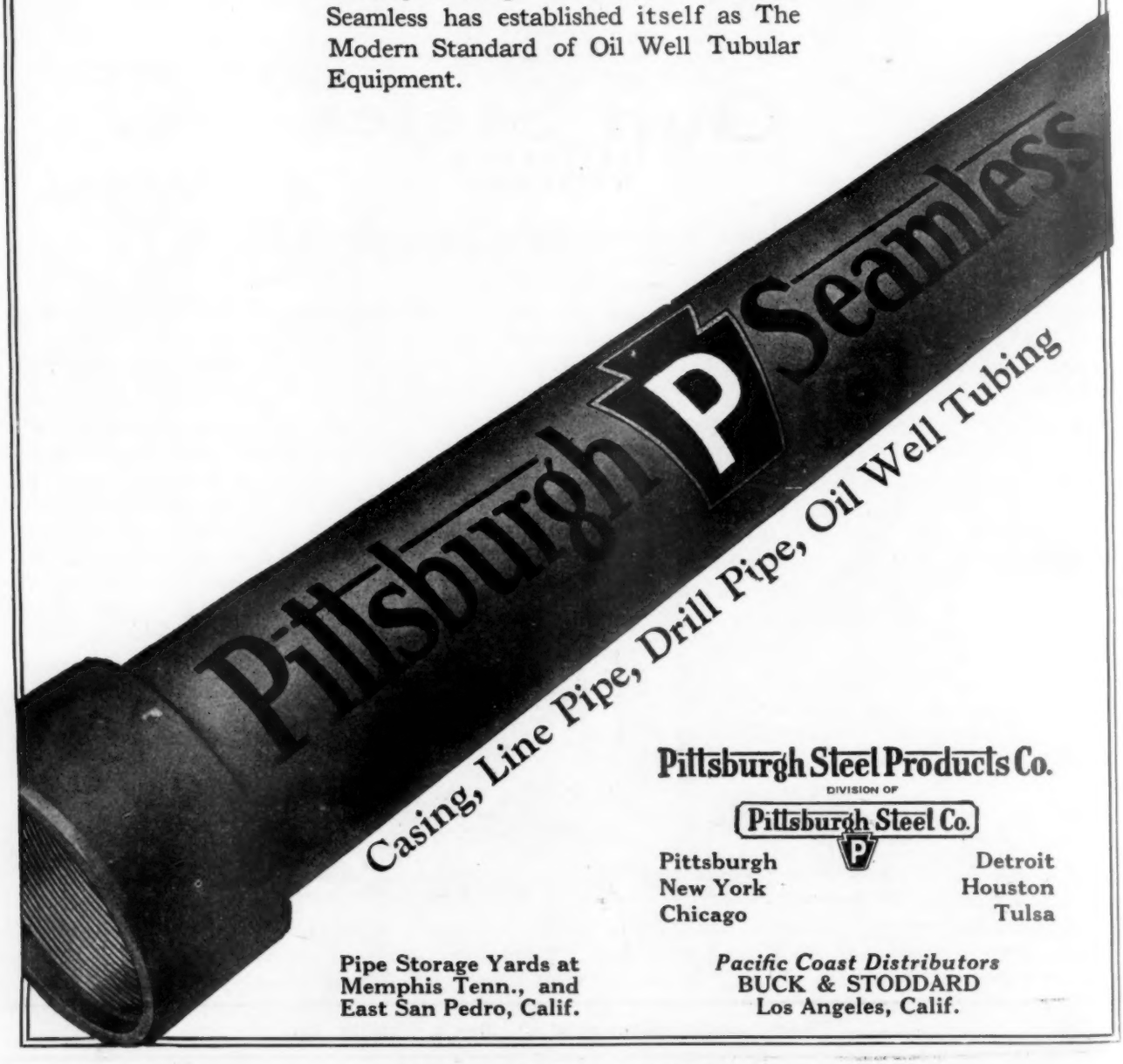

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A. L. BURNS, *Gen'l Manager*
SPENCER W. ROBINSON, *Editorial Director*
J. KENT RIDLEY, *Managing Editor*

NEW YORK: Room 408-409, 250 Park Avenue, R. P. Swinsky, Manager.

PITTSBURGH: 510 Park Bldg., W. W. Pigue, Manager.

CHICAGO: Room 520, 624 S. Michigan Ave., O. R. Waller, Manager.

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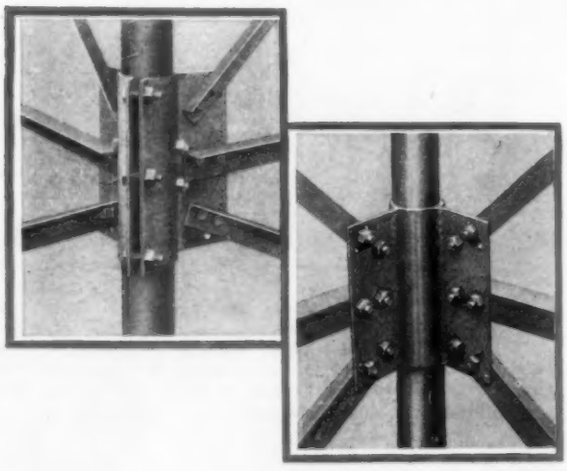

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Say you saw it in The OIL WEEKLY

Markets--Production--Crude Prices

H. J. STRUTH, *Staff Economist, Houston, Texas*

Lower Crude Market Only Alternative To Expedite Control

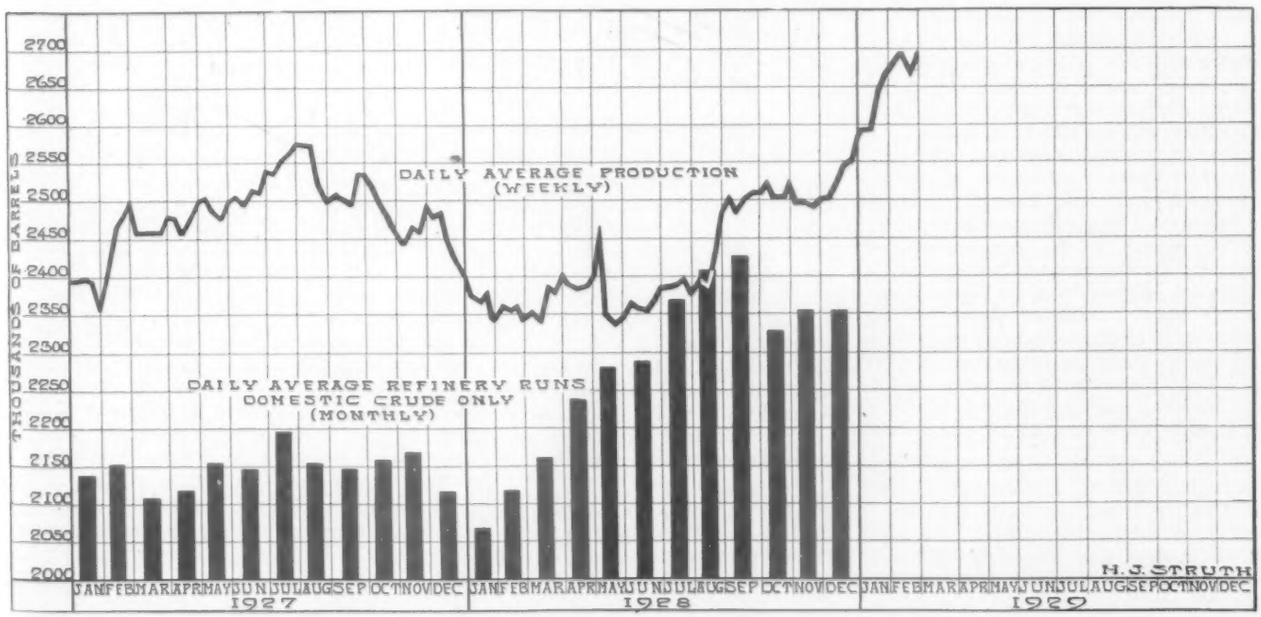
WHATEVER encouragement was imparted to the industry during the week ending February 16, has been dispelled by the results of last week, when the daily average production of crude back-tracked to a new high level of 2,694,150 barrels, an increase of 19,250 barrels over the preceding week. A sharp upturn in West Texas and another sizeable gain in California makes it more than ever apparent that a reduction in posted prices offers the only sound and convincing argument in favor of needed control. With all of the serious discussion pertaining to the urgent need for curtailment, the daily average production continues to mount to new high levels.

Evidently the decline registered during the week ended February 16 was construed as a signal that the production curve was headed definitely downward and offered an incentive to shift into "high gear." In reality, what happened during the week of the decline was that severe weather conditions throughout the Mid-Continent area hampered operations and prevented what would have otherwise been a gain in production. Those of an optimistic turn of mind immediately credited this turn of events to the fact that the industry has at last adopted a program of curtailment. While a number of censtructive ideas have been advanced recently, and it is believed that the industry in general is giving serious consideration to the need for control, it can be said without reservation that we are still a long way from any definite plan of action that is a positive remedy for overproduction. As matter stand now, the only alternative to expedite the necessary measures of control is a reduction in the posted price of California and West Texas crudes.

Oklahoma operators seem to be the only group at present that are really exhibiting any determination to solve the problem of overproduction. The idea of a Sunday shut-down seems to be spreading in that territory and it is expected that a number of the larger companies will adopt this plan as an experiment. The machinery for prorating production in the entire state, under Ray Collins, seems to be getting into action and undoubtedly will soon demonstrate the workability of the plans recently inaugurated there.

Oklahoma's overproduction problem is still far from solved, but it is believed that the serious determination with which operators there are getting into line has practically saved the day for the Oklahoma crude market. Until recently it appeared imminent that further reductions would be made in Oklahoma crude prices. Now, it appears that the danger of another cut has temporarily subsided. The situation in California, however, is becoming worse every day and there is no

DOMESTIC PRODUCTION AND REFINERY RUNS



DETAILS OF CRITICAL FIELDS

Pool	Wells Completed	Total Initial Production	Initial Per Well	Number Producing Wells	Daily Production Barrels	Daily Production Per Well	Rigs Up	Wells Drilling
WEST TEXAS—								
Hendrick	536	2,902,985	5,416	545	163,965	301[1]	4	35
Church & Fields	189	203,465	1,077	187	27,705	148	.	.
Gulf-McElroy ..	70	56,225	803	70	12,605	180	.	2
Yates	293	1,946,520	6,598	293	84,735	289[1]	3	9
Totals	1,088	5,109,195	4,696	1,095	189,010	264	7	46
TEXAS PANHANDLE—								
Hutchinson Co. .	1,146	549,665	479	1,020	25,705	25	2	23
Gray County ...	329	135,560	412	319	21,615	68	8	41
Carson County .	184	60,445	329	160	5,685	36	2	15
Wheeler County.	44	14,645	333	35	530	15	6	15
Moore County ..	11	6,145	559	9	1,670	186	5	7
Totals	1,714	766,460	447	1,543	55,205	36	23	101
OKLAHOMA—								
Seminole	1,697	2,177,828	1,283	1,429	300,591[2]	210	68	328
St. Louis	369	377,787	1,022	308	104,638[2]	339	11	65
CALIFORNIA—								
Santa Fe Springs[3]	117	395,000	3,376	100	180,000	1,800	32	174

[1]Production partially pinched.
[2]Prorated.
[3]New development only. Add 24,000 bbls. for field total.

longer any doubt about the probability of a reduction in light oil prices. In fact that is the only measure that will call California operators to order. This applies also to the West Texas crude situation. Last week the gain for Texas amounted to 21,750 barrels over the preceding week. West Texas, Southwest Texas and the Panhandle region contributed practically all of this gain. Field advices indicate that several of the purchasing companies are limiting their pipe line runs and seem to be rather frank about the probability of an immediate cut in posted prices.

Price Reduction Remedy

Since California and West Texas operators have failed to heed the urgent need for some sort of control in their respective flush areas, there is only one course open that will produce the desired results and that is to reduce the market price. Perhaps when this occurs, these operators will realize the seriousness of their situation and begin to earnestly devise sound ways and means of curtailment. Caifornia must obviously resort to drastic action or it will not only become a serious menace to the entire oil market structure of the country but will necessarily pay the penalty of its excesses with severe losses. Much of the excess oil produced in California is being dumped on the market along the Atlantic coast. This is bound to exert an unfavorable tone to the entire oil market and should be taken in hand before it does serious damage.

It should be remembered that Venezuela is becoming an increasingly important factor not only in the crude market but in the gasoline market. This year, it is possible that Venezuela will ship large, increased amounts of gasoline to the Atlantic seaboard, which is bound to offer serious competition with California gasoline. Thus, there may be a veritable price war between Venezuelan and California gasoline along the Atlantic coast. The outcome will be that California will lose the fight, because it will have to supply any gallonage it attempts to hold at a loss.

It seems deplorable that such uneconomic practices should exist within the industry at a time when every effort should be made to prevent their occurrence. If price reductions are posted immediately, as the situation indicates, it is believed that far more real progress will be made to attain a higher degree of equilibrium. It would be far better to absorb a price cut now and bring order out of chaos than to wait until the situation gets in such state that even a demoralized market will not enable the industry to adjust its affairs and profit by its errors during the present year.

Oklahoma Sunday Observance

The increasing favor with which the idea of a Sunday shutdown is meeting among operators is causing a much brighter prospect for the Oklahoma crude oil market. More than a dozen companies have now expressed their belief in the plan, and it is hoped that others will shortly follow suit, and this is expected if the plan works as well hereafter as it has to date. Oklahoma operators for the most part seemed sold on the plan and belief that if it would be followed in every producing area, particularly the flush pools, the crude oil overproduction would be remedied at once.

While operators are anxiously watching the outcome of the latest conservation experiment the daily crude oil output of Greater Seminole continues to be pinched daily, and after the first of March further curtailment is anticipated since the Mission pool will then come under the proration program. As the situation now stands a company may take its proration daily during the week or shut down entirely on Sunday.

Although Oklahoma's production has been partly prorated, the curtailment has not been strong enough to prevent the storage of some crude oil. Considering all stocks, both refined and crude, the present output is exceeding the daily demand by from 40,000 to 50,000 barrels per day.

The refinery market of Group 3 was rather uncertain during the past week, but remained unchanged. The latter part of the week gave indications that the winter weather which has greatly handicapped the marketing demand from Group 3 area was breaking up.

U. S. Motor gasoline is still held from 6¾ to 7 cents per gallon. Some refiners are reported to have lowered their price to 6½ cents. Higher gravities are holding up. Natural gasolines are firming up due to negotiations for the closing of some big contracts.

Demand for kerosene and distillates continue to be good, and quotations are steady. Kerosene market is expected to enter the spring season in good order if the distillates can hold up. Fuel oils are draggy, except for low cold test grades.

California

The latest report of the Pacific Coast office of the American Petroleum Institute, showing a sharp increase in both light oil and gasoline stocks brought California operators face to face with the situation in the state and reflected a condition which should be remedied, if present crude prices are to be maintained. Light oil stocks jumped 2,163,000, with gasoline stocks spurting 1,291,000 barrels to a total of more than 12,000,000 barrels.

Both wholesale and retail gasoline markets in California and the entire Pacific Coast states have gone from bad to worse, the present condition being nothing short of a state of chaos. Tank wagon prices have been reduced to a rediculous figure, with the service station price falling accordingly. Gasoline is being retailed at company-owned stations for 12½ cents per gallon. The major companies are now fighting one another and it is difficult to ascertain the true tank wagon price. When the present "war" started, the official tank wagon price was 16½ cents, with a service station of 20½ cents. The tank wagon price has fallen to either 12½ cents or 11½ cents, depending upon which faction is recognized, while the service stations are dispensing at a bare cent above the wholesale. The situation is expected to become so bad that it will automatically adjust itself. Efforts are being made to have a federal investigation conducted.

A further reduction in gasoline prices may result in a crude slash. Long-time contracts are being made for cheap gasoline.

Export gasoline has not been greatly affected by the domestic trouble.

United States Daily Average Production

Figures below are taken from the complete revised estimates of the AMERICAN PETROLEUM INSTITUTE except for the current week, which are advance estimates issued by the A. P. I. and are subject to revision:

1927	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Ave.	United States Total
November	766,900	106,650	501,750	138,100	49,400	97,850	114,900	75,050	623,850	2,474,450	74,233,500
December	720,700	106,150	531,650	138,500	47,200	94,950	111,250	77,150	624,600	2,452,150	76,017,050
1928											
January	675,450	108,300	523,300	125,450	45,250	90,050	109,600	77,000	617,100	2,371,500	73,516,500
February	664,450	110,550	538,750	115,800	45,300	88,250	104,850	75,550	614,750	2,358,250	68,388,850
March	646,850	112,250	575,850	119,900	44,400	85,600	102,150	78,700	617,450	2,383,150	73,877,650
April	620,450	112,150	617,850	118,850	46,900	83,450	107,000	78,500	613,550	2,398,700	71,961,100
May	610,100	108,750	561,450	129,850	43,600	91,250	112,100	82,200	630,900	2,370,200	73,476,300
June	594,850	105,200	554,400	135,400	42,350	102,850	109,300	82,400	643,400	2,370,150	71,104,500
July	587,150	102,750	597,250	133,650	42,150	90,700	113,400	80,400	644,700	2,392,150	74,156,600
August	656,350	102,200	604,000	130,200	40,200	87,500	113,300	77,700	634,150	2,445,600	75,534,600
September	724,850	99,750	604,150	129,500	39,050	84,700	112,550	78,850	631,650	2,505,050	75,151,500
October	741,350	97,900	598,550	129,950	38,800	83,550	114,000	83,300	624,450	2,511,850	77,867,800
November	715,750	96,600	586,350	135,100	38,600	83,000	109,700	81,150	653,050	2,499,300	74,978,300
December	710,600	97,200	603,700	135,050	37,300	81,350	113,450	74,600	697,850	2,551,100	79,084,400
1929											
January	722,550	97,150	632,500	136,750	36,650	78,600	111,950	73,200	747,250	2,635,600	81,703,600
Feb. 2	728,700	96,800	641,100	139,550	35,950	77,400	110,600	71,850	778,100	2,680,050	18,760,350
Feb. 9	728,350	95,700	640,550	143,500	35,700	77,250	109,600	72,950	789,900	2,693,550	18,854,850
Feb. 16	708,200	95,950	635,350	142,550	36,150	76,850	108,600	73,150	798,100	2,674,900	18,724,300
Feb. 23	703,400	95,500	656,250	142,400	35,700	76,100	107,850	68,750	808,200	2,694,150	18,859,050
Increase	.....	.....	20,900	.....	.....	.....	.....	.....	10,100	19,250	134,750
Decrease	4,800	450	.....	150	450	750	750	4,400	.....	.....	.....

TEXAS

(Outside Gulf Coast)

PANHANDLE DISTRICT

	Feb. 23	Feb. 16
Carson County	5,700	5,550
Gray County	22,000	20,250
Hutchinson County	25,250	23,750
Wheeler County	600	600
Others	1,700	1,500
Total	55,250	51,650

NORTH TEXAS

Archer County	17,500	17,450
Burkburnett	9,100	9,150
Electra	13,000	13,150
Iowa Park-KMA	6,300	6,450
Montague and Cooke Counties	9,700	9,800
Wilbarger	26,900	27,200
Others	500	500
Total	83,000	83,700

WEST CENTRAL TEXAS

Brown County	8,900	9,000
Callahan County	3,700	3,700
Coleman County	3,700	3,600
Eastland-Desdemona	6,800	6,850
Jack County	1,700	1,750
Palo Pinto County	400	400
Shackelford County	13,100	13,000
Stephens County	6,400	6,400
Throckmorton County	700	700
Young County	7,400	7,600
Others	700	700
Total	53,500	53,700

WEST TEXAS

Crane-Upton Counties	50,600	50,500
Crockett County	2,250	2,100
Howard County	47,800	40,600
Jones County	6,500	6,850
Mitchell-Scurry Co.'s	2,700	2,600
Pecos County	83,750	84,600
Reagan County	18,800	18,100
Winkler County	170,400	165,200
Others	1,700	1,600
Total	384,500	372,150

EAST CENTRAL TEXAS

Boggy Creek	3,700	3,400
Corsicana-Powell	8,950	9,050
Currie	500	500
Mexia	5,800	5,900
Nigger Creek	600	600
Richland	500	500
Wortham	1,350	1,400
Total	21,400	21,350

SOUTHWEST TEXAS

Dale	700	700
Laredo District	12,500	12,350
Luling	12,800	12,900
Lytton Springs	1,000	1,000
Somerset	600	600
Salt Flat	26,000	21,800
Others	5,000	3,450
Total	58,600	52,800
T'tl Tex. (Outside Gulf Coast)	656,250	635,350

TEXAS GULF COAST

Barbers Hill	5,900	6,200
Batson	1,250	1,350
Big Creek	4,850	5,000
Blue Ridge	4,000	4,300
Boling	2,000	2,100
Damon Mound	950	850
Goose Creek	6,500	6,250
Hull	9,900	9,950
Humble	4,600	4,600
Orange County	2,850	2,950
Pierce Junction	12,400	11,900
Raccoon Bend	2,250	1,850
Saratoga	900	900
Sour Lake	2,900	3,000
South Liberty	6,200	6,500
Spindle Top	33,550	33,500
Sugar Land	7,600	7,400
West Columbia	7,000	6,900
Others	5,900	5,500
Total	121,500	121,000
Texas Total	777,750	756,000

OKLAHOMA

Braman	3,450	3,500
Logan County	13,200	13,300
Blackwell	4,100	4,200
Hubbard	1,950	1,950
Thomas	850	900
Tonkawa	10,500	10,750
Garber	6,000	6,150
Burbank	22,200	22,200
Osage (outside Burbank)	25,800	26,000
Cushing	20,500	20,400
Yale Jennings	7,650	7,700
Davenport	1,650	1,600
Bristow Slick	18,950	18,950
North Okmulgee	14,600	14,150
Lyons Deaner	8,450	7,950
Cromwell	7,850	8,050
Papoose	3,400	3,450
Wewoka	5,100	5,300
Seminole	33,650	37,850
Lowlegs	33,800	39,900
Searight	9,600	8,750
Little River	84,650	93,500
Earlsboro	54,950	63,600
Duncan District	7,050	7,150
Graham	4,450	4,500
Fox	1,500	1,500
Healdton	13,000	13,050
Hewitt	8,550	8,650
Scholem Alechem	13,200	13,350
Pearson	1,700	1,700
St. Louis	106,750	121,250
Allen	27,500	27,300
Maud	41,900	43,250
Okla. City	5,450	5,500
Mission	35,150	1,200
Others	39,850	39,750
Total	703,400	708,200

CALIFORNIA

Santa Fe Springs	202,000	191,500
Long Beach	181,500	180,500
Huntington Beach	47,000	48,000
Torrance	15,000	15,000
Dominguez	10,000	10,000
Rosecrans	6,500	7,000
Inglewood	26,500	26,500
Midway-Sunset	73,000	73,000
Ventura Avenue	55,500	55,000
Seal Beach	32,500	32,500
Elwood-Goleta	23,000	23,500
Kettleman Hills	3,400	3,300
Others	132,300	132,300
Total	808,200	798,100

KANSAS

Greenwood County	22,000	22,300
Florence-Covert	1,000	850
Peabody-Ebling	3,050	3,300
Eldorado-Towanda	12,050	12,300
Augusta-Fox Bush	2,900	2,950
Rainbow Bend	1,000	1,100
Russell	3,400	3,450
Churchill	7,200	7,300
Oxford	5,800	5,850
Sedgewick	7,600	6,850
Others	29,500	29,700
Total	95,500	95,950

NORTH LOUISIANA

	Feb. 23	Feb. 16
Homer	4,000	4,000
Haynesville	5,500	5,500
Caddo Light	8,750	8,850
Caddo Heavy	2,800	2,850
DeSoto-Red River	3,950	4,050
Elm Grove	600	600
Bellevue	750	750
Cotton Valley	2,900	3,000
Urania	5,800	5,850
Pleasant Hill	450	450
Others	200	250
Totals North Louisiana	35,700	36,150

LOUISIANA GULF COAST

Bayou Boullion	300	350
East Hackberry	6,150	6,400
Edgerly	850	800
Evangeline	800	800
Lockport	5,000	4,550
Sorrento	550	600
Sulphur Dome	2,000	2,500
Sweet Lake	550	600
Vinton	4,100	4,250
Others	600	700
Total Louisiana Gulf Coast	20,900	21,550
Louisiana Total	56,600	57,700

ARKANSAS

El Dorado	4,600	4,850
Champagnolle	10,150	10,250
Smackover Light	6,250	6,600
Smackover Heavy	51,050	51,050
Stephens	1,000	1,050
Nevada	1,450	1,450
Lisbon	1,500	1,500
Others	100	100
Total	76,100	76,850

MOUNTAIN STATES

WYOMING

Salt Creek	32,000	34,250
Grass Creek	2,200	2,200
Elk Basin	750	700
Big Muddy	2,250	2,250
Lost Soldier	3,400	3,350
Rock River	2,400	2,350
Lance Creek	300	300
Oregon Basin	3,350	3,350
La Barge	2,050	2,700
Others	2,600	3,050
Total	51,300	54,500

MONTANA

Cat Creek	1,250	1,400
Sunburst	5,450	6,750
Pondera	1,800	1,850
Total	8,500	10,000

COLORADO

Moffats (Craig)	850	1,050
Fort Collins	2,700	2,500
Florence	1,150	1,250
Others	1,600	2,100
Total	6,300	6,900

NEW MEXICO

Table Mesa	100	...
Artesia	950	950
Hogback	200	250
Rattlesnake	1,250	450
Others	150	100
Totals	2,650	1,750
Totals Mountain States	68,750	73,150

EASTERN STATES

(Including Ill., Ind., Ohio, W. Va., Pa., Ky., and N. Y.)	107,850	108,600

PRODUCTION SUMMARY

East of Rockies	1,817,200	1,803,650
Total U. S.	2,694,150	2,674,900

Sunday Observance Idea Gains Favor in Mid-Continent

By WARREN BAKER
Staff Representative

TULSA.—The six-day a week idea, or Sunday shutdown program, is gaining favor with Mid-Continent operators. During the past week a number of other companies followed the example set by Prairie Oil & Gas Company and Barnsdall Corporation. Approximately 25 companies are expected to shut down next Sunday.

This simple plan for correcting the overproduction evil is the most far-reaching step that the oil industry has taken in many years. Executives of the companies adopting the program believe that it is the best and most practical plan yet drawn up for reducing the crude oil output, and it is the general belief that if the practice becomes universal that the industry's overproduction trouble would be a thing of the past.

It was very interesting to notice that the shutting in of the Prairie Oil & Gas Company and Barnsdall Corporation wells did not harm their output the following day. In fact most of them made a trifle more crude than their daily average had been running. A number of these wells were troubled with water, but they showed no harmful result of being partly curtailed during the day. The companies had little or no trouble in getting their wells to kick over again, even those on air pressure. The idea that it would require an enormous pressure to start these wells flowing again was apparently disproven when the wells started flowing at 350 to 400 pounds.

Companies which have adopted the Sunday shut down program are as follows: Barnsdall Corporation, Prairie Oil & Gas Company, T. B. Slick, Inc., H. F. Wilcox Oil & Gas Company, W. B. Pine, Pure Oil Company, Mid-Kansas Oil & Gas Company, Indian Territory Illuminating Oil Company, Magnolia Petroleum Company, Mid-Continent Petroleum Corporation, Tidal Oil Company, Phillips Petroleum Company, Atlantic Oil Producing Company, Continental Oil Company, Shaffer Oil & Refining Company, and Transcontinental Oil Company, and a number of smaller firms.

Of interest was the announcement that Mid-Kansas Oil & Gas Company, H. F. Wilcox Oil & Gas Company, and Senator W. B. Pine would join the movement. These three oil concerns have been opposing the present state-wide proration plan, which was made a legal one by the State Corporation Commission.

Thus far two of the larger opreators in Oklahoma have failed to join the movement. These are the Carter Oil Company and Gypsy Oil Company. Their policy is to wait and see the results of the shut in wells. The idea that these two companies are not prorating must not be gotten, since they are taking their proration daily instead of shutting completely down on Sunday.

Last Sunday production of Greater Seminole, including St. Louis, showed a loss of 79,000 barrels from the previous day's gauge due to the shutting in by many of the companies. Next Sunday even a greater decline is expected. This drop seems large but if taken throughout the week would mean only about 11,000 barrels daily.

Production of the Greater Seminole district during 24 hours ending 7 a. m. Sunday and 24 hours ending 7 a. m. Monday tell the story of the Sunday shutdown better than words. Production was as follows:

	Sunday	Monday
Little River	86,470	67,987
Maud	39,792	32,948
Mission	48,840	46,694
Bowlegs	36,334	26,955
Earlsboro	60,261	41,376
Seminole City	33,978	23,434
Searight	9,339	8,631
St. Louis	116,180	104,132
Total	431,194	352,157

Further Reductions in Production to Come

Beginning March 1, Mission pool will come under the geenral state-wide plan of limiting production to 650,000 barrels daily. Production of the state has been exceeding this figure each day (except last Sunday) by close to 50,000 barrels, but at this time this figure is expected to be materially reduced.

Ray Collins, umpire, has mailed a letter to each operator in the Greater Seminole district telling them the plan for further restriction of production. All wells in the Greater Seminole area will be opened from 7 a. m. March 1 to 7 a. m. March 2 for a potential flow upon which base proration figures for the next two weeks ending March 15 will be made. With Mission coming under the shutdown agreement it will mean a larger potential and consequently a bigger cut in production.

If it were not for Mission the state's production would have been in the vicinity of the set 650,000 barrels during most of the time during the past two weeks. With Mission under the shutdown it is hoped to have the state's production close to the figure.

Benefit of Sunday Plan Depends On Nation-Wide Observance

By H. J. STRUTH

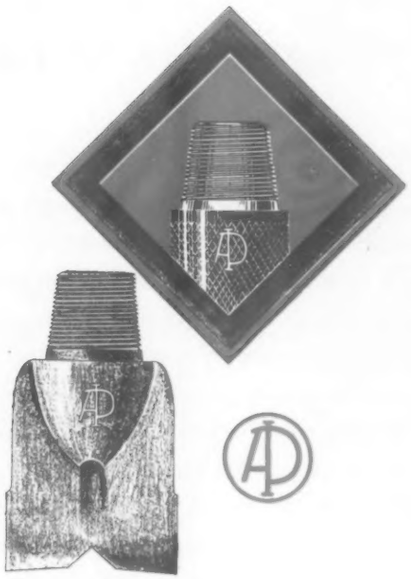
HOUSTON. — While the Sunday shut-down plan is another step in the right direction, many doubt whether it will have any appreciable effect upon the national production of crude. Like any other constructive plan, the Sunday shut-down idea cannot solve or help to solve the problem of overproduction unless its scope is extended over the entire industry. An analogy to the Slick plan is the gasolineless Sunday idea which was inaugurated by the government during the World War. How much gasoline was actually conserved by that plan is problematical, but it is known that there was no material lessening in highway congestion during those patriotic times. As a matter of fact, the motorist was generally reminded on Saturdays that the next day would be "gasolineless" through large signs posted at filling stations. Under this plan it was possible to obtain a tankful on Saturday night, and not be deprived of well-planned weekends. It can also be said of the Sunday shut-down idea for the petroleum industry that as far as flush areas are concerned, where proration is in effect, the operator could shut down on Sunday and open up his shut-in wells on Monday without losing a barrel of his scheduled output for the week.

In an effort to determine the popularity of this idea among prominent oil company officials, the writer has had an opportunity to discuss this matter with a number of men who have given some serious thought to it. Several prominent engineers and operators in the Mid-Continent area are of the opinion that the plan will not obtain the desired effect because it will not receive the combined support of all operators. Others feel that a shut-down on Sunday would be offset by increasing production on Monday and succeeding days.

W. S. Farish, president of the Humble Oil & Refining Company stated that he does not see how a Sunday shut-down

(Continued on page 48)

Prepare for tomorrow



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Say you saw it in The OIL WEEKLY

CRUDE OIL PRICE QUOTATIONS

(Revised to February 26, 1929)

CURRENT POSTINGS

EASTERN STATES

(Effective February 15, 1929)

Penna Grade Oil in New York Transit Lines (New York)	$4.10
Brandford District Oil in National Transit Lines (Pennsylvania)	4.10
Penna Grade Oil in National Transit Lines (Pennsylvania)	4.00
Penna Crude Oil in Southwest Pennsylvania Lines (West Virginia)	4.00
Penna Grade Oil in Eureka Pipe Line Lines (Pennsylvania)	3.90
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	3.85
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia)	1.45
Corning 35-cent Grade Oil in Buckeye Pipe Line Co.'s lines	1.80
Corning 25-cent Grade Oil in Buckeye Pipe Line Co.'s lines	1.75
Somerset Oil in Cumberland Pipe Line lines (Kentucky)	1.60
Ragland Grade Oil in Cumberland Pipe Line lines (Kentucky) (Effective Jan. 29, 1929)	.60
Keister (Pennsylvania)	1.20

CENTRAL STATES

(Effective January 25, 1929)

Posted by Ohio Oil Co.

Illinois	1.45
Indiana	1.27
Lima	1.50
Plymouth	1.18
Princeton	1.45
Waterloo	1.25
Wooster	1.62

WESTERN KENTUCKY

(Effective January 25, 1929)

All grades	1.53

MID-CONTINENT

(Effective January 25, 1929)

Carter Oil Company, Gulf Pipe Line Company, Sinclair Pipe Line Company, Prairie Oil and Gas Company and The Texas Company.

25 to 25.9gravity	.66
26 to 26.9 gravity	.72
27 to 27.9 gravity	.78
28 to 28.9 gravity	.84
29 to 29.9 gravity	.90
30 to 30.9 gravity	.96
31 to 31.9 gravity	1.02
32 to 32.9 gravity	1.08
33 to 33.9 gravity	1.11
34 to 34.9 gravity	1.14
35 to 35.9 gravity	1.17
36 to 36.9 gravity	1.20
37 to 37.9 gravity	1.23
38 to 38.9 gravity	1.26
39 to 39.9 gravity	1.29
40 to 40.9 gravity	1.32
41 to 41.9 gravity	1.35
42 to 42.9 gravity	1.38
43 to 43.9 gravity	1.41
44 and above	1.44

MID-CONTINENT

(Effective January 24, 1929)

Magnolia Petroleum Company

Under 26	.60
26 to 26.9 gravity	.65
27 to 27.9 gravity	.70
28 to 28.9 gravity	.75
29 to 29.9 gravity	.80
30 to 30.9 gravity	.90
31 to 31.9 gravity	1.00
32 to 32.9 gravity	1.08

From 33 to 44 gravity and above, Magnolia Petroleum Company prices are the same as those of Carter Oil Company.

PANHANDLE

(Effective January 24, 1929)

GRAY COUNTY

(Humble Oil & Refining Company, Magnolia Petroleum Company, Gulf Pipe Line Company and Sinclair Pipe Line Company).

Below 29 gravity	.69
29 to 29.9 gravity	.75
30 to 30.9 gravity	.81
31 to 31.9 gravity	.87
32 to 32.9 gravity	.93
33 to 33.9 gravity	.96
34 to 34.9 gravity	.99
35 to 35.9 gravity	1.02
36 to 36.9 gravity	1.05
37 to 37.9 gravity	1.08
38 to 38.9 gravity	1.11
39 to 39.9 gravity	1.14
40 to 40.9 gravity	1.17
41 to 41.9 gravity	1.41
42 to 42.9 gravity	1.46
43 to 43.9 gravity	1.51
44 and above	1.56

WHEELER COUNTY

(Humble Oil and Refining Company and Magnolia Petroleum Company)

Below 30 gravity	.70
30 to 30.9 gravity	.76
31 to 31.9 gravity	.82
32 to 32.9 gravity	.88
33 to 33.9 gravity	.91
34 to 34.9 gravity	.94
35 to 35.9 gravity	.97
36 to 36.9 gravity	1.00
37 to 37.9 gravity	1.03
38 to 38.9 gravity	1.06
39 to 39.9 gravity	1.09
40 to 40.9 gravity	1.12
41 to 41.9 gravity	1.15
42 to 42.9 gravity	1.18
43 to 43.9 gravity	1.21
44 and above	1.24

CARSON-HUTCHINSON COUNTIES

(Humble Oil and Refining Company, Magnolia Petroleum Company and Gulf Pipe Line Company)

Below 32 gravity	.72
32 to 32.9 gravity	.78
33 to 33.9 gravity	.81
34 to 34.9 gravity	.84
35 to 35.9 gravity	.87
36 to 36.9 gravity	.90
37 to 37.9 gravity	.93
38 to 38.9 gravity	.96
39 to 39.9 gravity	.99
40 to 40.9 gravity	1.02
41 to 41.9 gravity	1.05
42 to 42.9 gravity	1.08
43 to 43.9 gravity	1.11
44 and above	1.14

WEST TEXAS

(Humble, Gulf, Magnolia, The Marland Company and Southern Crude Oil Purchasing Company)*

Crane-Upton, Crockett, Pecos and Winkler Counties, all grades	.65

*Gulf does not post in Winkler County; Magnolia posts in Crane, Upton and Winkler Counties. The Marland Company posts only in Crane, Upton and Crockett Counties; Southern posts only in Crane, Upton and Winkler Counties.

CALIFORNIA CRUDE OIL PRICES AT THE WELL

(EFFECTIVE JANUARY 18, 1929)

Following are the current prices offered by Standard Oil Company for crude oil at the well: (Price per barrel of 42 gallons in fields indicated)

Gravity	Ventura *	Signal Hill	Alamitos Heights-Seal Beach	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Elwood Terrace	Torrance	Richfield	Whittier La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway-Sunset Elk Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge
14-14.9	$ .85	$ .70	$ .70	$ .70	$ .70	$ .70	$ ..	$ ..	$ .70	$ .70	$ .70	$ .70	$ .70	..	$ .50	$ .50	$ .50	$ .50	$ .50	$ .50
15-15.9	.85	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.50	.50	.50	.50	.50	.50
16-16.9	.85	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.50	.50	.50	.50	.50	.50
17-17.9	.85	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.50	.50	.50	.50	.50	.50
18-18.9	.85	.75	.75	.75	.75	.75	..	..	.75	.75	.75	.70	.75	..	.50	.56	.56	.56	.56	.56
19-19.9	.85	.80	.80	.80	.80	.80	..	..	.80	.80	.80	.75	.80	..	.50	.62	.62	.62	.62	.62
20-20.9	.85	.85	.85	.85	.85	.85	..	..	.85	.85	.84	.80	.84	..	..	.68	.68	.68	.68	.68
21-21.9	.86	.89	.89	.89	.89	.89	..	..	.89	.89	.88	.85	.88	.89	..	.74	.74	.74	.74	.74
22-22.9	.87	.93	.93	.93	.93	.93	..	..	.93	.93	.91	.90	.91	.92	..	.80	.80	.80	.80	.80
23-23.9	.90	.97	.97	.97	.97	.97	..	..	.97	.97	..	.95	.94	.95	..	.85	.85	.85	.85	.85
24-24.9	.94	1.01	1.01	1.01	1.01	1.01	1.01	.94	1.01	1.01	..	.98	.97	.98	..	.90	.90	.90	.88	.88
25-25.9	.98	1.05	1.05	1.05	1.05	1.05	1.05	.98	1.05	1.05	..	1.01	1.00	1.01	..	.95	.95	.95	.91	.91
26-26.9	1.02	1.09	1.09	1.09	1.09	1.09	1.09	1.02	1.09	1.09	..	1.04	1.04	1.04	..	1.00	1.00	1.00	.94	.94
27-27.9	1.06	1.13	1.13	1.13	1.13	1.13	1.13	1.06	1.13	1.13	..	1.07	1.08	1.07	..	1.05	1.05	1.05	.98	.97
28-28.9	1.10	1.17	1.17	1.17	1.17	1.17	1.17	1.10	1.17	1.17	..	1.10	1.12	1.10	..	1.10	1.10	1.10	1.02	..
29-29.9	1.14	1.21	1.21	1.21	..	1.21	1.21	1.14	..	1.21	..	1.13	1.16	1.15	..	1.16	1.16	1.16	1.06	..
30-30.9	1.18	1.25	1.25	1.25	..	1.25	1.25	1.18	..	1.25	..	1.16	1.20	1.20	..	1.22	1.22	1.22	1.10	..
31-31.9	1.23	1.30	1.30	1.30	..	..	1.30	1.23	..	..	..	..	..	1.25	..	1.28	1.28	1.28	1.14	..
32-32.9	1.28	1.35	1.35	1.35	..	..	1.35	1.28	..	..	..	..	..	1.30	..	1.34	1.34	1.34	1.18	..
33-33.9	..	..	..	..	..	..	1.41	1.34	..	..	..	..	..	1.35	..	1.40	1.40	1.40	1.22	..
34-34.9	..	..	..	..	..	..	1.47	1.40	..	..	..	..	..	1.40	..	..	..	1.46	1.26	..
35-35.9	..	..	..	..	..	..	1.53	1.46	..	..	..	..	..	1.45	..	..	..	..	1.30	..
36-36.9	..	..	..	..	..	..	1.59	1.52	..	..	..	..	..	1.50	..	..	..	..	..	..
37-37.9	..	..	..	..	..	..	1.65	1.58	..	..	..	..	..	1.55	..	..	..	..	..	..
38-38.9	..	..	..	..	..	..	1.71	1.64	..	..	..	..	..	1.60	..	..	..	..	..	..
39-39.9	..	..	..	..	..	..	1.77	1.70	..	..	..	..	..	1.65	..	..	..	..	..	..
40-40.9	..	..	..	..	..	..	1.83	1.76	..	..	..	..	..	..	..	..	..	..	..	..
41-41.9	..	..	..	..	..	..	1.89	1.82	..	..	..	..	..	..	..	..	..	..	..	..
42-42.9	..	..	..	..	..	..	1.95	1.88	..	..	..	..	..	..	..	..	..	..	..	..

KETTLEMAN HILLS—55 degree Gravity and above $1.65 per barrel. *Union Oil Company.

CRUDE OIL PRICE QUOTATIONS (*Continued from Page 43*)

(Magnolia Petroleum Company)
(Effective January 24, 1929)

Mitchell County	$ .65
Howard-Glasscock County (shallow)	.65
Howard-Glasscock County (deep)	.65

Col-Tex Refining Company

Howard and Mitchell Counties	$ .80

MARKHAM
The Texas Company
(Effective January 30, 1929)

All grades	.90

LULING

All grades	.80

NORTH AND CENTRAL TEXAS
(Effective January 24, 1929)
Ranger, North Texas, Mexia, Powell, Richland, Wortham, Currie, Moran, Nocona and Lytton Springs Crude
(Humble Oil and Refining Company)

Below 25	.60
25 to 25.9 gravity	.66
26 to 26.9 gravity	.72
27 to 27.9 gravity	.78
28 to 28.9 gravity	.84
29 to 29.9 gravity	.90
30 to 30.9 gravity	.96
31 to 31.9 gravity	1.02
32 to 32.9 gravity	1.08
33 to 33.9 gravity	1.11
34 to 34.9 gravity	1.14
35 to 35.9 gravity	1.17
36 to 36.9 gravity	1.20
37 to 37.9 gravity	1.23
38 to 38.9 gravity	1.26
39 to 39.9 gravity	1.29
40 to 40.9 gravity	1.32
41 to 41.9 gravity	1.35
42 to 42.9 gravity	1.38
43 to 43.9 gravity	1.41
44 and above	1.44

SOUTH TEXAS

Mirando and Salt Flat	.80

GULF COAST
(Effective January 26, 1929)

Grade "A" all companies	1.20
Gulf Coast Light Oil, below 25	1.05
25 to 25.9 gravity	1.07
26 to 26.9 gravity	1.09
27 to 27.9 gravity	1.11
28 to 28.9 gravity	1.13
29 to 29.9 gravity	1.15
30 to 30.9 gravity	1.17
31 to 31.9 gravity	1.19
32 to 32.9 gravity	1.21
33 to 33.9 gravity	1.23
34 to 34.9 gravity	1.25
35 to 35.9 gravity	1.27
36 to 36.9 gravity	1.29
37 to 37.9 gravity	1.31
38 to 38.9 gravity	1.33
39 to 39.9 gravity	1.35
40 an above	1.37

***Humble Oil & Refining Company's postings on Gulf Coast Light stop at 35 to 35.9 Its price on all crudes above 35 to $1.37 per barrel.**

Magnolia Petroleum Company's postings stop at 31 to 31.9.

SOMERSET
Grayburg

Below 33 gravity	1.05
33 to 33.9 gravity	1.07
34 to 34.9 gravity	1.09
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.13
37 to 37.9 gravity	1.15
38 and above	1.17

WYOMING-MONTANA
(Effective January 25, 1929)
Wyoming

Byron	1.33
Ferris	1.60
Elk Basin	1.36
Grass Creek	1.36
Rock Creek	1.18
Lost Soldier	.95
Lance Creek	1.38
Mule Creek	1.10
Notches	.65
Big Muddy	1.28
Osage	1.38
Hamilton Dome	.85
Pilot Butte	1.75
Torchlight-Greybull	1.48
Lander	.80
Simpson Ridge	.80
Rex Lake	1.10
South Casper Creek-Poison Spider	1.00

Salt Creek
Midwest Refining Company

29 to 29.9 gravity	.90
30 to 30.9 gravity	.96
31 to 31.9 gravity	1.02
32 to 32.9 gravity	1.08
33 to 33.9 gravity	1.11
34 to 34.9 gravity	1.14
35 to 35.9 gravity	1.17
36 to 36.9 gravity	1.20
37 and above	1.23

MONTANA

Sunburst	$1.65
Cat Creek	1.48
Lake Basin	2.20

NEW MEXICO

Artesia	1.08
Hogback	1.43

CANADA
(Effective January 26, 1929)

Oil Springs	1.97
Petrolia	1.90

LOUISIANA-ARKANSAS
(Effective January 26, 1929)
Homer, Haynesville, Caddo, El Dorado, De Soto and Crichton and Cotton Valley*
(Atlantic Oil Producing Company, Standard of Louisiana, Magnolia Petroleum Company and

27 to 27.9 gravity	.78
28 to 28.9 gravity	.84
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35 to 35.9 gravity	1.17
36 to 36.9 gravity	1.20
37 to 37.9 gravity	1.23
38 to 38.9 gravity	1.26
39 to 39.9 gravity	1.29
40 to 40.9 gravity	1.32
41 to 41.9 gravity	1.35
42 to 42.9 gravity	1.38
43 to 43.9 gravity	1.41
44 gravity and above	1.44

***Shreveport-Eldorado's postings stop at above 40 gravity.**

The posting on Cotton Valley is same as Caddo. From 36 to 52 and above the regular gravity schedule is followed.

The Texas Company pays North Texas gravity scale in North Louisiana.

STEPHENS
(All Companies)

Below 28 gravity	.70
28 to 28.9 gravity....N	.74
29 to 29.9 gravity	.78
30 to 30.9 gravity	.82
31 to 31.9 gravity	.86
32 gravity and above	.90

SMACKOVER
(All Companies)

Below 24 gravity	.75
24 and above	.90
Bellevue	1.25
Jennings	1.15
Vinton	1.30
Edgerly	1.30
Starks Dome	1.30
Urania	.85
Calion	.75

IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

American Petroleum Institute Figures (Barrels of 42 Gallons)

	Week Ended Feb. 16	Week Ended Feb. 9
AT ATLANTIC COAST PORTS—		
Baltimore	65,000	187,000
Boston	143,000	65,000
New York	850,000	1,174,000
Philadelphia	243,000	177,000
Others	125,000	291,000
Total	1,426,000	1,894,000
Daily Average	203,714	270,571
AT GULF COAST PORTS—		
Galveston District	.....	.....
New Orleans and Baton Rouge	.....	363,000
Port Arthur & Sabine District	.....	.....
Tampa	.....	.....
Total	.....	363,000
Daily Average	.....	51,857
AT ALL UNITED STATES PORTS—		
Total	1,426,000	2,257,000
Daily Average	203,714	322,428
Daily Average Four Weeks Ended	268,357	267,929

RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

American Petroleum Institute Figures (Barrels of 42 Gallons)

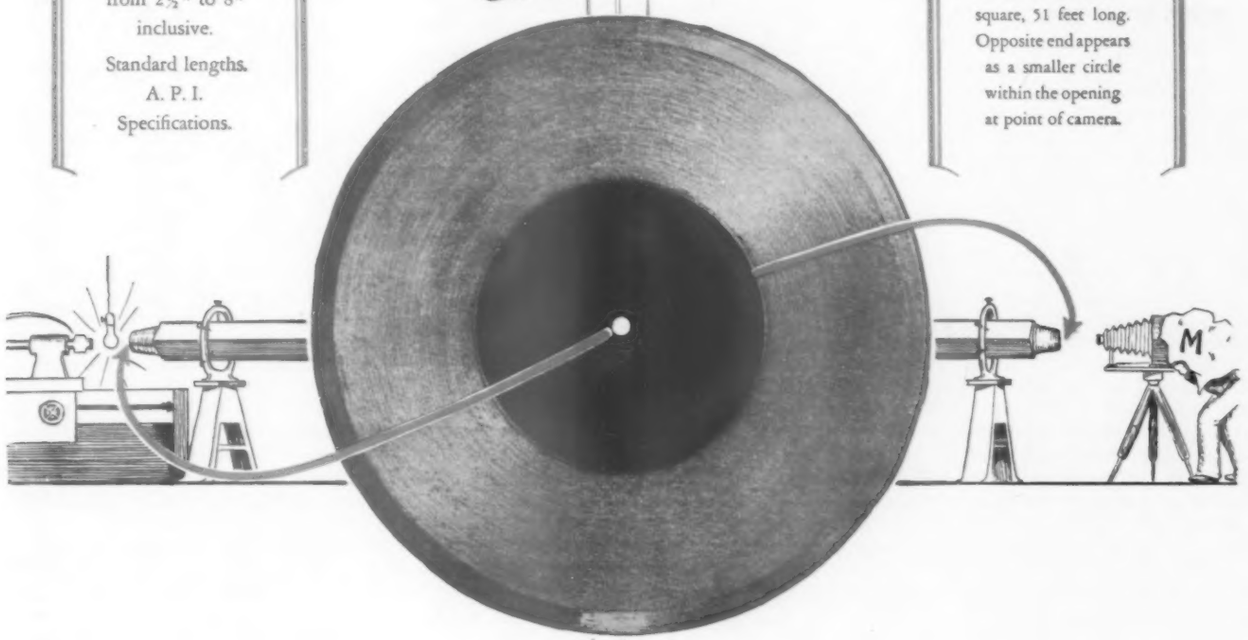
	Week Ended Feb. 16	Week Ended Feb. 9
AT ATLANTIC COAST PORTS—		
Baltimore	95,000	100,000
Boston	.....	.....
New York	410,000	316,000
Philadelphia	36,000	272,000
Others	76,000	43,000
Total	617,000	731,000
Daily Average	88,143	104,429
AT GULF COAST PORTS—		
Total	.....	.....
Daily Average	.....	.....
AT ATLANTIC & GULF COAST PORTS—		
Total	617,000	731,000
Daily Average	88,143	104,429
Daily Average Four Weeks Ended	78,750	71,643
Distribution of Total California Oil Receipts is as follows:		
Crude	.....	.....
Gasoline	445,000	654,000
Gas Oil	172,000	77,000
Total	617,000	731,000

True as a Gun Barrel

A camera eye view of an Emsco Square Drill Stem 51 feet long

Made in all sizes, from 2½" to 8" inclusive. Standard lengths. A. P. I. Specifications.

Actual photo of Emsco Drill Stem, 6" square, 51 feet long. Opposite end appears as a smaller circle within the opening at point of camera.



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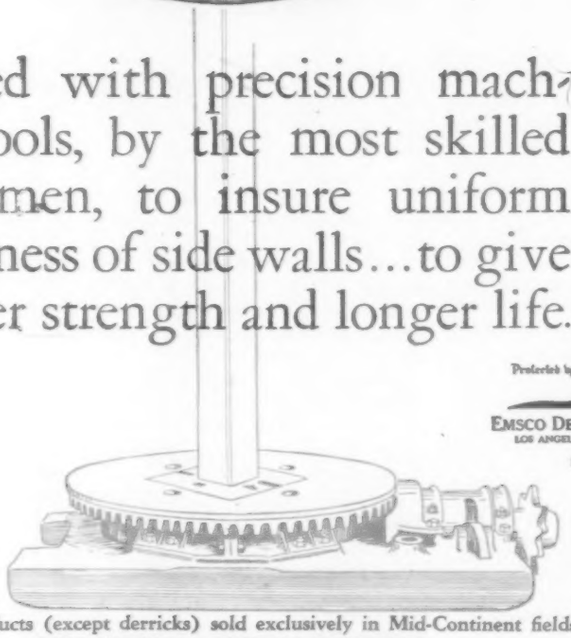

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Say you saw it in The OIL WEEKLY

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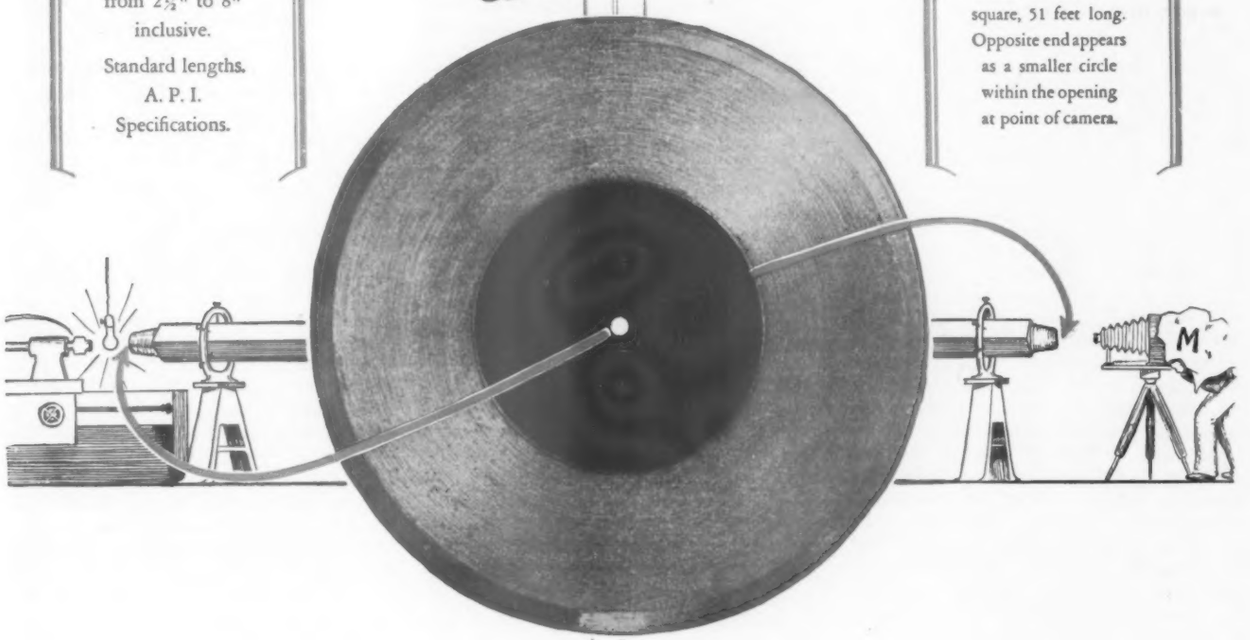

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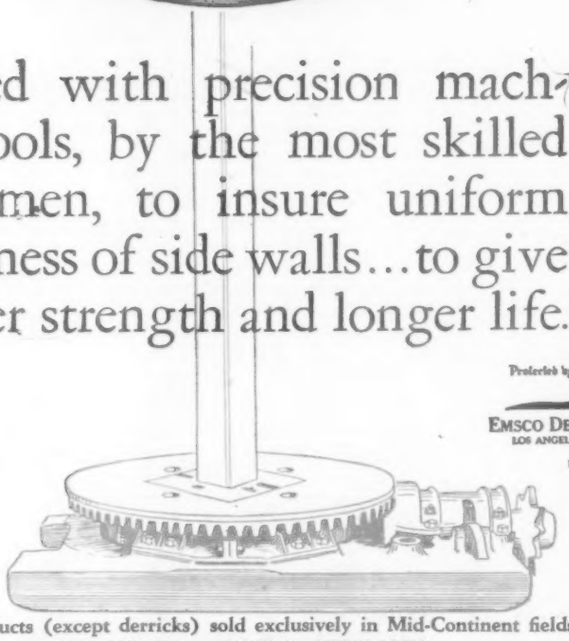

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Say you saw it in The OIL WEEKLY

Water Encroachment Brings Vote On Winkler Curtailment

Proposed reduction of 50,000 barrels expected to meet with some protests; pipe lines would draw on storage if cut

By H. H. KING
Staff Representative

FORT WORTH, Texas. — Winkler County operators have been requested to vote by wire or mail on recommendations made by E. A. Landreth, president of the Landreth Production Corporation and chairman of the proration advisory committee, and R. A. Alsobrook, umpire, that the allowable production for the county be reduced 50,000 barrels daily effective March 1 because of the water encroachment endangering the life of the flowing wells. A special session of the proration advisory committee has been called for February 27 to be held in Fort Worth to act on the matter, and operators are urged to express their opinions as to the cut before the meeting. The advisory committee will probably take some action regarding the cut, and submit their recommendations to the Texas Railroad Commission, which is charged with the responsibility of enforcing proration.

The water situation in the Hendrick field portion of the Winkler County area has been aggravated lately by reason of two separate groups of operators having flowed their wells wide open in defiance of the proration rules through relief obtained by getting a temporary injunction against the commission. Murchison Oil Company (Texas-State Oil Company) and Cranfill Brothers Oil Company obtained a temporary injunction in Austin against the commission enforcing proration rules in respect to the flowing of their wells, and have been averaging about 4000 barrels daily since December 19. Owners of offset producers to the eight wells opened by this partnership have been allowed to partially open their wells. Bankers Producing Corporation's single producer on a five-acre tract, Section 30, Block B-5, was also freed from proration restrictions through a temporary injunction obtained about January 15, and has been flowing open most of the time since, but is now making about 65 per cent. water and b.s., although completed early last October as a 5000-barrel producer. Six wells offset this producer, and the owners of the former have opened their production in proportion.

According to signed letter mailed to Winkler County operators on February 21 by R. A. Alsobrook, umpire, the Bankers Producing Corporation's well is a sample of water conditions found in the Hendrick field when restrictions are removed from daily production.

Water Danger

Excerpts from the letter follows:

"The Bankers Producing Corporation's Hendrick 1, unit No. 12, registered 4654 barrels on last official potential daily flow of clean oil, and went to 65 per cent. cut oil in less than 48 hours. This well had been flowing wide open during the preceding 23 days under the privilege gained through the temporary injunction. Starting with a well head pressure of 380 pounds (that required to stay within proration) on January 15 via 14/64-inch choke, the well was opened to (varied daily) from 50/64-inch to 1½-inch chokes, with pressure declining gradually to 85 pounds. The gross production for the 23 days was 37,752 barrels, or an average of 1641 barrels daily. The well was flowed in excess of proration allowance from January 15 to February 20, except for 12 days during the latter part of January and the first part of February when tank cars were not available. Production was shut in during the period that tank cars were not to be had."

Umpire Alsobrook states further in his letter "This department considers that the imminent danger of ruination of the field raises an emergency that must be dealt with at once. Please use your influence to bring about a further pinching-in of the field not to exceed 125,000 barrels daily."

Winkler County's allowable production is now 175,000 barrels daily, while last official potential production figures credit it with 2,490,775 barrels daily from 528 wells. However, only a small number of the total wells were gauged, and then only for a brief open flow test.

In addition to the water situation, the Hendrick field is facing a temporary crude marketing problem, as crude purchasers have lately shown a tendency to curtail their purchases in parts of West Texas. The crude market has developed a weak spot since the general reduction of Mid-Continent crudes January 24 and 25, while West Texas escaped the cut, thereby removing a large portion of the price advantage previously enjoyed by West Texas crudes in going into direct competition with better grades.

In the letter dated February 25 to Winkler County operators regarding the proposal to slash 50,000 barrels off the daily allowance, Mr. Landreth states "That drastic action is needed in the curbing of crude oil becomes more pronounced throughout the United States, as each month the production or supply exceeds by far the ever increasing demand. At the present rate of production in the United States, disaster is the ultimate result. With crude surplus of 66,000,000 barrels, conservatively estimated for the present year at the present rate of production, the inevitable results are crude price cuts which will not enable the operator to produce his crude at a profit. Proration is seemingly the only course available to control this excessive output of crude, which is necessary if the industry expects to profit from its operations."

Opposition to the 50,000-barrel crude reduction in Winkler County is almost certain to be voiced by some of the leading producers, while such a cut will cause some of the trunk line outlets from the district to draw on storage to maintain a full line, and a compromise for one-half the amount asked for is likely. The Yates field operators have an allowance of 100,000 barrels daily approved by the commission, but are now only taking 87,500 barrels daily, pending completion of new pipe line capacity by Humble Pipe Line Company between its Lytle station and Ingleside terminals. The Yates field increase was requested in the name of the Mid-Kansas Oil & Gas Company, purchaser and producer, and Illinois Pipe Line Company, transporter. The latter carrier delivers the oil to Humble Pipe Line Company at Lytle station.

Recognized crude price postings are being adhered to in the West Texas district by producers in disposing of their oil, except in instances where proration enforcement has been jumped by the temporary court injunction route, and this is confined to Winker County. However, a noticeable weakness in the market has become evident within the past two weeks.

Marland Operating Settles Pool Properties

Big Spring, Texas.—Marland Production Company has taken over the field operations of the Settles pool 10,000-acre block held on a 50-50 basis with the Group One Oil Corporation (Texon Oil & Land Company) effective February 15. The latter concern has been in charge of developments with a separate field organization, and under the new arrangement Marland Production Company's field forces in the Chalk field proper will take over the drilling and pumping of the joint properties. H. B. "Pat" Hurley is field superintendent in the Big Spring district for Marland Production Company and C. C. Prude is lease foreman, both working directly under George H. McIntyre, who has charge of all Texas operations with headquarters at Fort Worth.

Davis Takes Lead in Unit Plan Of Wildcat Drilling

Pending action of Oil and Gas Association Committee, its president lines up operators through personal effort

TULSA.—Another effort to cope with the problem of the overproduction of oil is meeting with success, through the personal efforts of William N. Davis, president of the Mid-Continent Oil & Gas Association and vice-president of the Phillips Petroleum Company of Bartlesville.

In a letter, just made public, Mr. Davis says he has talked with sufficient executives of the larger oil companies of the Mid-Continent area to convince him that enough of them are in favor of the plan to bring about unit development on 95 per cent. of the wildcat tests, which are drilled by the support of several companies.

It was December 19 that the board of directors of the Mid-Continent Oil & Gas Association passed a resolution favoring unit development on wildcat tests. The matter was placed in the hands of a committee, which will report at the next meeting of the board. Meanwhile, however, President Davis has taken it upon himself to get the movement under way through correspondence and through conferences.

The history of the plan and the present status of the movement are revealed in the following copy of the letter Mr. Davis has written to the executives of the larger Mid-Continent Oil companies:

Letter to Producing Executives

"On December 19th last, at the annual meeting of the Board of Directors of the general Mid-Continent Oil & Gas Association, a resolution was adopted, urging, among other things, that all producers of oil adopt a general policy of refusing to buy spreads of undeveloped acreage about new drilling projects or to contribute to or participate in the opening of any new areas where the acreage had not been pooled or unitized so that the development of the block could be controlled; and a committee was appointed to report as to how this objective could best be obtained. The committee has, for some weeks, been prepared to report to the board, recommending that a committee of three be selected and charged with the duty of organizing this movement, but the board has had no subsequent meeting and may not have one for some time; and I am undertaking to do what I can, personally, to crystallize sentiment for this most constructive practice and to bring it into general use.

"Overproduction and nearly all of the economic troubles of the oil industry can be traced back to a fundamental source, which is the mad competition by the owners of separate acreage in a productive area for a maximum share of oil from a common reservoir. So long as such separate competitive ownership of a common reservoir exists there can be no permanent and entirely equitable and satisfactory program for its orderly development or curtailment of its production. Regulation through proration agreed to by the operators is always difficult to attain, more or less inequitable in its application, and is at best an emergency measure. It is however, apparently, the only remedy after the development of a pool has gotton under way, and, under those circumstances, the operators should turn to it in an earnest effort to meet the emergency as effectively as possible.

"What the industry needs, however, is a method of preventing such emergencies. There is a permanent, equitable, and effective remedy—elimination of the competition within the pool by a merging of separate interests into a common ownership of the common reservoir. It lies within the power of the operators to do this voluntarily and without the aid of legislation. It is not a royal road—free of obstacles, and it cannot be immediately and fully accomplished in all potential areas, but it can be done in any given area regardless of others, and the enormous economies which would result make any objections which can be raised, altogether insignificant. The unification of an area permits not only control of its production, but also its scientific and orderly development, with the elimination of many dry holes, greater oil recovery from perhaps one-half or one-third the usual number of wells, and a corresponding reduction in equipment, storage, pipe lines, water supply, and many other items of investment and development costs. These economies would amount to hundreds of millions of dollars a year if all the pools in the United States could be developed under such a program. This would take time, but if the industry in general would adopt this practice now and follow it, I venture to predict that in two years, or in less time, the problem of overproduction would be permanently behind us.

"Nearly all of the important operators who have given the matter thought declare that they favor this policy and are following it where possible. But it is easier to follow the beaten path. Independent wildcatters and lease brokers will not make the necessary effort to unitize their areas until they find that the companies upon whom they depend to finance their promotions refuse to buy spreads or otherwise assist in creating uncontrollable situations. They offer their promotions to our land departments with a statement

A. P. I. Curtailment Committee Gets Going at Tulsa

TULSA—Organization was perfected and plans laid for gathering the information through which the Interior Regional committee of the A. P. I. curtailment program will function, when the committee met here February 25 at the call of W. C. Franklin, chairman for the region, and vice-president of the Tidal Oil Company, Tulsa.

William N. Davis, vice-president of the Phillips Petroleum Company, Bartlesville; and B. H. Stevens, vice-president of the Magnolia Petroleum Company, Dallas, were elected members from the interior section to the general committee of which R. C. Holmes, president of The Texas company, is chairman. W. S. Fitzpatrick, chairman of the board of the Prairie Oil & Gas Company, Independence; and Roy B. Jones, president of the Panhandle Refining Company, Wichita Falls, were selected as alternates for general committee membership.

These four and Chairman Franklin were selected a sub-committee, which will gather the information, on which the Interior Committee will pass. This sub-committee will collect the information for a meeting to be called later. From this information the Interior Committee will determine its recommendations for the General Committee.

It is the plan to have the second meeting of the Interior Committee just in advance of the meeting of the General Committee in New York.

that pooling is impossible and that they have already sold certain acreage to certain companies, and our lease men—without investigating the truth of the statements, reluctant to miss what appears to be a good deal—also follow the easy way and make their contributions. *If each of our land departments had instructions from their management to refuse to participate except where pooling arrangements had been made,* the brokers and wildcatters would soon adopt the new program, and gradually this constructive practice would come into more and more frequent use. A few experiences with important pools would so demonstrate its advantages that its universal adoption would follow.

Ten Companies Adopt Policy

"Within the last few days, representatives of 10 companies which are among the principal contributors to new drilling projects in the Mid-Continent field, have assured me that they thoroughly believe in this program and have been following it or will do so in the future. However, two of these companies have since called me up to say that they had that day refused to participate in several promotions of new drilling projects and asking what progress I was making in securing the adherence of a sufficient number to that policy to make it effective, as they could not continue indefinitely to follow it alone.

"I assured them that they are not following it alone, but the question is raised as to how this movement can be crystallized into effective action. Lease brokers will tell your land departments that this company or that company has bought a spread of acreage around a proposed well, and, so long as doubt exists, there will be a strong tendency to make exceptions here or there, and thus in a short time the whole movement would fail.

"I can see no legal or other vital objection to a written, signed agreement that for a fixed period—say one year, all the signatory companies would adhere to this policy and that exceptions, if any are found necessary, will be laid before an umpire or a committee for approval; *but if this is not acceptable, I would be glad to have your suggestions for a plan which would remove the doubt as to the activities of others, and the movement thus made effective.*

"I have talked regarding this matter to enough operators to be convinced that at least 20, who between them probably give 95 per cent. of all the assistance to the drilling of wildcats in the Mid-Continent field, would adhere to this policy if they were assured that the others would, and these companies have it within their power, by cooperative action, to bring this practice into almost universal use.

"As I have said, this is the one permanent, equitable, and fully effective remedy for overproduction, and I hope you will appreciate its importance and assist me in its successful consummation. Anticipating your early reply, I am, . . . "

How the unit plan can be inaugurated within a company is shown in the following letter Mr. Davis has written to Paul J. McIntyre, superintendent of the land department of the Phillips Petroleum Company:

Phillips Company Policy

"The management is keenly interested and has been very active in cooperating with other major oil companies in finding remedies for the economic ills of the industry. It is particularly concerned in securing a balance between production and consumption of crude, as most of the industry's economic troubles have their source in overproduction of the raw material.

"In the final analysis, this overproduction has its source in the intense competition in each pool between operators owning separate tracts, and as this character of competition can be eliminated only through the creating of a common ownership of the common reservoir, the company has adopted the policy—along with a number of other major companies—of limiting its assistance and participation in new drilling projects to blocks or areas which have been pooled, unitized, or otherwise put in such a position that their development can be controlled in the event production is found. We are active in an effort to secure the adherence of all of the important companies in the Mid-Continent field to this program.

"This does not mean that we have stopped taking leases, drilling test wells, or participating in promotions for the drilling of such wells. On the contrary, please make it clear to the promoters—individuals and brokers, of wildcat wells that the management stands ready to assist them as heretofore where the play is recommended by the land and geological departments, but only where suitable arrangements have been made to control the development of the area in the event of production.

"A great many brokers are much exercised in the belief that the major companies are attempting to put them out of business. This is not the case, but, as we see it, the best and only permanent solution to overproduction and regulation of future pools lies in unit operation. This program will effect economies running into many millions of dollars, through elimination of dry holes and increased recovery from a greatly reduced number of producing wells, with a corresponding saving in all of the accompanying equipment. These economies would be so great as to justify any additional labor and effort which may be necessary to effect the desired pooling arrangements. The area pooled, if possible, should cover the entire indicated structure. The ideal minimum would be four sections, but the plan will have to be flexible in the beginning, and a pooling of a lesser area might be acceptable as being better than none at all.

"Your earnest cooperation along these lines will be of untold benefit to your company and to the industry of which you are a part. I can not impress upon you too strongly the importance that you men, yourselves, have in making a success of this program by educating the brokers and promoters of new drilling projects, while continuing to carry on their wildcatting, to look for help from the major companies on the basis of unit operation rather than on the old plan of selling spreads. No plan is perfect, and this one has its obstacles and difficulties, but they fade into insignificance when compared with the economies involved and the stabilization of the industry which would result.

"Enclosed herewith is copy of a letter sent by me, as President of the Mid-Continent Oil & Gas Association, to representatives of 31 principal companies operating in the Mid-Continent field. It may give you a clearer picture of the program. You will note that 10 major companies are now adhering to the plan.

"Let us get in behind this and put it over 100 per cent."

Sunday Observance Idea Gains Favor in Mid-Continent
(Continued from page 40)

would benefit the industry unless it was made nation-wide in scope, and he believes that, even then, the effect would not be more than cursory because operators in the flush pools could easily boost their output sufficiently to offset the effect of a shut-down on Sunday.

Mr. Farish believes, however, that all of the plans which have recently been advanced are at least making the industry as a whole give serious thought to its unfavorable economic position.

In Mr. Farish's opinion, there is too much selfishness in the oil industry, which makes it very difficult to arrive at any definite solution to its immediate problems. He believes that the economic laws will do more to solve the problem of overproduction than anything else, and unless some constructive steps are taken price will become the final regulatory factor that will automatically adjust the difficulties. This will be an expensive procedure but it will be the penalty for further disregard of the need for controlled production.

In weighing all of the factors in connection with the launching of a Sunday shut-down program, the outstanding effect of the plan seems to be that it is a constructive step. If its soundness can be demonstrated by those companies that have decided to give it a fair trial, it is possible that the idea will spread to practically all producing areas of the country. It is unlikely that there will be a nation-wide shut down on Sundays, but at least a large number of companies will adopt the idea if it proves advantageous and does not offer any complications in the normal procedure of operating policies. Experience in Oklahoma has proven that even where the gas and air lift are in use, there seems to be no serious effect upon resuming operations on Monday morning. Thus it is evident that the plan is feasible and would work out satisfactorily on a large scale.

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Oklahoma--Kansas Field Notes

WARREN BAKER, *Staff Representative, Tulsa, Oklahoma*

Oklahoma City Pool Has 37 Tests Drilling; Limitation Planned

Tulsa.—A meeting of the Oklahoma City district operators has been called for Saturday, March 9, by Wirt Franklin, chairman of the area's shut-down committee. It is hoped to prevent starting of additional tests in the region.

Additional locations recently staked in the field have swelled total operations to 32.

TULSA.—The Trosper Park pool, south of Oklahoma City, was the center of much attention during the latter part of the past week, as a result of a number of tests having reached interesting depths, and the lack of any startling developments in other districts of the state. The district now has 32 operations, all expecting to go to the deep producing horizon of the only producer — about 6400 feet — if commercial production is not found at an upper depth.

The most important test at the present time is the T. B. Slick and Phillips Petroleum Company's Sudik 1, C NE NE Section 8-10-2w, four miles southeast of the discovery well, and in northern Cleveland County. This well has topped the Layton sand at 5190 feet and has a total depth of 5225 feet, where it is preparing to core.

At this depth the Slick-Phillips well is running much lower than the Indian Territory-Foster discovery well. At this depth correlations are not always accurate, due to the strong possibilities of a crooked hole, which must be taken into consideration. The thickness of the Layton will be an important factor. Indian Territory Illuminating Oil Company had several hundred feet of the Layton, which was pretty well saturated with oil. The core taken in the Slick-Phillips will be watched with interest. This is the deepest test in the district.

The next deepest hole is T. B. Slick's Wilkins 1, C NE SE 18-13-3w, another wildcat. It is also below 5100 feet. Apparently both tests are off the structure. Nevertheless the Slick-Phillips Sudik test has had several very interesting oil and gas showings in the Tonkawa horizon. A number of tests are below 4000 and 4500 feet, with others scattered along at various depths. All in all, the drilling exploration of the Oklahoma City area is making rapid headway.

Slick and Phillips are prepared to make a real deep test on the Sudik farm. The well is in a 12-inch hole, which is the deepest in the state.

Mission And Other Seminole Regions Quiet

There was little exciting development the past week in Greater Seminole. Most of the energy was expended in curtailing production to meet the state requirements of 650,000 barrels. So far production continues to run around 50,000 barrels above this figure, but with the first of March and new potential gauges, further reductions are anticipated.

Only three new wells were added to the Mission pool this week. From here on out completions will be more scattered than last week when about 50 wells were drilled in following the lifting of restrictions. Production at Mission, however, was pepped up by the application of air to a number of wells. Production fell just slightly short of 50,000 barrels on several occasions during the week. Several wells practically doubled their recovery when placed on air or gas pressure. Indications now are that the estimate of this column a couple of months ago placing Mission potential production at about 50,000 barrels will be correct.

Production may slightly exceed this amount with the placing of more wells on air and completion of new producers. No startling completions are anticipated, however, since the district has lacked any new wells of such a nature and is now so well defined as to practically null the possibilities of such occurrences.

Fewer completions were made in the Misener and Hunton formations of western Maud, which caused a small decline in production. The producers in these formations are showing quick declines from their initial production, which is now expected to prove an important factor in the ultimate potential peak output of the pool.

A diagonal offset to the banner completion of Maud was made the past week. Like other offsets it did not come near to the initial producing capacity of the big well. Gypsy Oil Company's Miller 4, NE NE SE Section 18-8-5, produced 2015 barrels from the Misener sand at 4021 feet.

Magnolia Petroleum Company's Billington 1, N Wc NE SW Section 8-8-5, on the east side of Western Maud, found a hole full of water in the Wilcox sand from 4465-83 feet and is being plugged back to the Hunton lime, where it should make a small well.

Twin State Oil Company's Calvin 2, NWc SW Section 7-8-5, first Simpson sand producer in western Maud, has not been deepened. It is swabbing about 200 barrels daily.

The most important well in the St. Louis district was the Darby Petroleum Company's Youngblood 1, SEc NW Section 16-7-4. This test is located midway between the St. Louis and Pearson fields, two miles apart. The Darby well flowed 742 barrels in 24 hours, whiel drilling deeper in the Hunton lime at 3785 feet. It is showing no water.

Sinclair Oil & Gas Company's Nesbit 1, NE SE NW Section 18-7-5, found a hole full of water in the Wilcox sand from 4161-66 feet and was shut down for orders. This well is a diagonal southwest offset to T. B. Slick et al's north extension Wilcox sand producer to the St. Louis field. While defining the field in this direction it is of little importance, since production has not been expected to lay in this direction because of the closeness of several dry holes defining the north end of the original Wilcox sand pool at St. Louis. Several other completions will be made in this district during the next few weeks, upon whose performance some definite outlook for the new region may be had, however, the district is expected to prove quite small in producing area.

Prairie Oil & Gas Company apparently defined the northwest edge of the Searight field with Longacre 1, in Sec-

Limits of Maud Defined North and South

Tulsa.—North and south defining wells have been completed in the Wilcox sand in western Maud pool.

Sunray Oil Corporation's Stone 1, Section 19-8-5, southernmost well, filled up with water from the Wilcox sand at 4456-65 feet.

Sinclair Oil & Gas Company's Lewis 1, Section 6-8-5, north end of the field, had a hole full of water from the Wilcox at 4386-4409 feet.

In the southeast edge of the Little River field, Prairie Oil & Gas Company's Jackson 1, Section 24-7-6, has a hole full of water from 4527-30 feet in the Wilcox sand.

Superior Oil Corporation's Hermanghouser 1, Section 24-8-2e, Macomb district wildcat, was shot five times in the Hunton lime after plugging back from the Simpson sand, and has failed to make a well. It is being plugged.

tion 33-10-6. This test filled up with water from the Wilcox sand at 4369-72 feet.

Wildcat Gasser Near Perry

The most important wildcat development of the week was the finding of 9,000,000 feet of gas in the Alco Royalty Company's Waltermire 1, SE NW Section 33-21-1w, two and one-half miles south of Perry in Noble County. The sand was topped at 3387 feet and drilled to 3395 feet. Another good gas showing was found just above this depth. This promising wildcat, testing an area considered unfavorable, has now had six showings of oil and gas at depths from 858 feet to its present depth.

Colton and Lester's Payne 1, C NW SW Section 31-12n-19e, near Warner, in northern McIntosh County, found a half million feet of gas at 668 feet and is shutdown. Several important wildcat gas developments have been recorded in this territory while drilling at shallow depths during the past year.

Superior Oil Corporation's Herminghouser 1, SW NE NE Section 24-8-2e, west of Macomb, in western Pottawatomie County, has found water from 5506-5515 feet, which is either the top of the Wilcox sand, or the lower part of the Simpson formation. It will be plugged back to the Hunton lime at 4926-5204 feet, where it showed oil. This test has been central Oklahoma's most closely watched wildcat due to the showing in the Hunton, but which failed to produce after a prolonged fishing job. It is between the St. Louis and Oklahoma City fields.

Osages Want Lease Sale; Need the Money

Tulsa—Reports have been circulated that another Osage Indian lease sale would be held before the fiscal year was up on April 7. Now comes the announcement that the Osage Tribal Council has adopted a resolution asking that the Secretary of the Interior order another public sale of Osage Indian leases at Pawhuska on or about March 28 or 29. Tribesmen are quite anxious that another sale be held so that their next quarterly payment will be somewhat larger than it has been lately.

Casper, Wyo.—Billy Creek gas field, 40 miles north of Salt Creek, has been proven for oil. Carter Oil Company has a well on Section 16-48-80, producing by heads, making 250 barrels daily from top of the first Wall Creek sand. The oil is about the same gravity as Salt Creek. The well was drilled with rotary. It is estimated good for 1000 barrels when cleaned of mud. Operators are setting tanks and it will be 10 days before a production test can be made. Consolidated Royalty Company and Western Exploration Company each own quarter interest in the well.

Activity Presages Banner Year For Kansas; Sedgwick Rising

TULSA.—The year 1929 is being looked upon as the banner production year for Kansas. The state produced in excess of 38,000,000 barrels in 1928, against 41,000,000 barrels in 1927, and compared with its peak output of 43,-250,000 barrels in 1918, when the Eldorado and August fields were at their peak. This year the state has the new Sedgwick and Marion County pools in addition to other developments to draw upon.

Sedgwick County promises to go over the 10,000-barrel per day figure at any time. Its production at this moment is running about 750 barrels short of that figure. Many additional completions are due to be made at once. A good number of these are in proven locations and should carry the county's production well over the 10,000-barrel mark.

The twelfth well in the county was completed during the past week. It was Bu-Vi-Bar Petroleum-Gypsy Oil-Marland Production Company's Lyons 3, C NW SW Section 7-26-1e. The well made 1275 barrels the first 21 hours and is now averaging around 1450 barrels daily.

Production by wells in the county was as follows: (daily average for the week) Bu-Vi-Bar-Marland-Gypsy, Lyons 1, Section 7-26-1e, 1397 barrels; Bu-Vi-Bar-Marland-Gypsy, Lyons 2, Section 7-26-1e, 654 barrels, Lyons 3, 1450 barrels, Lantz 1, Section 12-2-1w, 664 barrels, Wright 1, Section 12-26-1w, 1038 barrels, Wright 2, 1108 barrels; Marland Production Company's Goodrich 1, Section 16-25-1e, 1095 barrels; Mary Jane Oil Company's Fitch 1, Section 6-26-1e, 731 barrels; Aladdin et al's Smyser 1, Section 36-25-1w, 345 barrels, one per cent. b.s. and 20 per cent. water; Reynolds & Hayes, Roll 1, Section 7-26-1e, 680 barrels; Barnsdall Corporation's Samuel 1, Section 24-25-1e, temporarily off production; and Shawver et al's Broer 1, Section 5-26-2e, off production most of the week, but made 885 barrels in one day.

Considerable interest was shown in the shallow showing encountered by H. H. Patton and the Shaw Oil Corporation's test in NEc Section 22-25-1e, one and one-half mile east of the Goodrich producer An oil showing was found at 2135 feet which it is believed would have developed into a commercial well. This is considered the Hoover sand level, and indicates that somewhere good production may be found in this horizon, which would be the fourth producing level for the county. This test is said to be running much higher than the Marland-Goodrich producer.

The rotary machines installed in the Valley Center area, hotspot of Sedgwick County, are making good drilling time and are expected to be completed before long. They are far outdistancing cable tools. This is the first time rotaries have been used in this part of Kansas, but hereafter more may be heard from them. Four are drilling in the Valley Center field.

Wildcat activity in Kansas is of particular importance. The past week saw two new producers create considerable interest. Burlingame & Long's Rex 1, SEc Section 22-33-3w, eight miles north of Caldwell, in Sumner County, and near which town the nearest producer is located, made 100 barrels in a two-hour swabbing test. It has a depth of 3875-3905 feet in the Bartlesville sand. Tankage is being erected.

Ness County came forward to speak for the central portion of western Kansas during the past week. Barnsdall Corporation's Lauck 1, C SW Section 35-18s-21w, a rank wildcat, found a half million feet of gas at 2275 feet. While the showing itself was of little importance it is considered an important indication and offers much encouragement for future drilling.

A number of important wildcat locations have been staked as follows:

La Fonte et al's Carlton 1, SEc SW Section 24-28-1e, Sedgwick County;

Marland Production Company's Graham 1, NEc SW Section 9-32-4e, Cowley County;

Reynolds & Rodges Updergraff 1, SEc SW SE Section 26-25-1w, Sedgwick County;

Hanche et al's Ryan 1, NWc NE Section 22-19-8e, Chase County;

McBridge Oil Company's Black 1, NEc Section 36-25-1w, Sedgwick County;

Sherman & Reynolds' Ucker 1, NEc NW Section 24-17-2e, Marion County;

Marland Production Company's Curry 1, NWc SW Section 26-34-2e, Sumner County;

T. C. Johnson's Detweiler 1, SWc NE NW Section 32-16-4e, Dickinson County;

Phillips and Shell Petroleum Corporation's McClellan 1, SEc SW Section 23-26-6e, Butler County;

Shell Petroleum Corporation's Penner 1, NW NE Section 15-24-3e, Butler County. The last named is thought to be on a core drill structure, since the company has had core drill machines in this part of Butler County for some time.

Marion County

All of the producers in the new deep pay in the Courtney Davis pool are either on the pump are being placed on the pump. Empire Oil & Refining Company's Suderman 1, SEc NE Section 12-19-2e, discovery well, is pumping an average of about 175 barrels daily with no water, through three-inch tubing. Darby Petroleum Company's diagonal offset in the NEc SE Section 12-19-2e, is pulling the big pipe and will run 2½-inch tubing. This well's production dropped below 400 barrels for the first time during the past week. Shell Petroleum Corporation's Funk 1, NWc SW Section 7-19-3e, continues to produce around 400 barrels per day. It is pumping through the three-inch tubing. A number of new tests continue to complete preparations for deepening to the new deep pay.

North and West Texas Field Notes

H. H. KING, *Staff Representative, Fort Worth, Texas*

East Side of Llano Pool Gets Two More Producers

SAN ANGELO. — Two more oil producers were in process of completion on the east side of the Llano pool, located in northern Winkler County, early this week, and the natural flow of one of the older wells was increased through deeper drilling. This pool centers on the W. F. Scarborough ranch, and principal owners of royalty oil being produced are holding out on signing division order, for a better price than the usual 65 cent quotation paid for all other Winkler country crude.

Oil produced in the Llano pool averages about 37 gravity, or about seven degrees above the gravity of Hendrick crude.

Magnolia Petroleum Company's Scarborough 1, which was completed early in January, increased its flow from 120 barrels to more than 200 barrels when deepened three feet to a total depth of 3033 feet late last week. Shell Petroleum Corporation and Llano Oil Company's Scarborough 4, a west offset to the Magnolia well, began flowing by heads late Monday after drilling into top of the lower pay at 3006 feet, with six-inch casing set at 2974 feet. Gulf Production Company's Scarborough 1, a north offset to the Magnolia producer, encountered first gas at 2934 feet, resulting in tools being blown up in hole. This latter test is also showing some oil in the hole.

Magnolia Pipe Line Company has a four-inch line serving this pool, while Shell Petroleum Corporation is pumping its production via a small line to the nearby Daugherty pool, where connection is made with Humble Pipe Line Company's eight-inch trunk line.

Simms Oil Company's wildcat test on the Ellwood ranch, located in southwestern Mitchell County, increased its gas flow to about 6,000,000 cubic feet daily February 22 when drilled to 607 feet. This wildcat encountered a flow of several million cubic feet on February 9, at the 600-foot level, and the rig caught fire. A string of 12½ inch casing was lowered to 604 feet when the fire damage was repaired, and since the last blowout the casing has settled about 15 feet, indicating that the well is drilling itself deeper in the loose sand. This wildcat is located at the center of SE Section 29, Block 18, S. P. Ry. survey, and east of the Chalk shallow field, Howard County.

In North Pecos County, the Pecos Valley Oil Company's Fee 2, which was reported last week as flowing by heads between the casing from pay at 1617-25 feet, has plugged back with rock to make new seat for the setting of pipe at 1585 feet. This well was flowing about 75 barrels daily, or similar to the current output of the discovery well on an offset location. McCarty Oil Company's wildcat test on the A. A. Gray land, which was also reported as showing for a producer last week in top of sand at 1162 feet, was deepened to 1168 feet, resulting in the hole filling with 32 gravity oil. The casing seat gave way late last week allowing upper water to break in, and the owners are now preparing to pull casing and cement the string before making further test for oil production. Talbot-Dittman et al's wildcat on the Unsicker land, located on a line between the above two Pecos County wildcat producers, was drilling ahead at 1435 feet early this week, carrying a small volume of salt water from the 1396-foot horizon.

Contract Means Drilling in Church & Fields Area

Fort Worth, Texas.—The drilling of approximately 20 additional tests on the west side of the Church & Fields area, Crane County, West Texas district, will probably be required in connection with the sale of two small producing leases held by the Weekly Oil Corporation and George Church, Fort Worth operators, to the Pioneer Oil & Refining Company, San Antonio. The latter concern has contracted to purchase the properties for $100,000 cash, and $250,000 additional payable from oil within 18 months from date of contract. The purchaser also agrees to drill up the remaining eight locations, starting tests at 90-day intervals until production is boosted to 1000 barrels daily. Each of these new tests will require from one to three offsets from other lease owners in the event of commercial production.

An 80- and 40-acre lease on University lands is involved in the above deal, with a settled gross of production of about 400 barrels daily from four wells. The former tract consists of W½ SW Section 39, Block 30, with two wells on the south end making a combined production of 190 barrels daily. The 40-acre tract consists of the SE SW Section 34, Block 30, with two wells on the west side making 210 barrels daily.

The Pioneer Oil & Refining Company is operating a 1500-barrel capacity skimming plant at Somerset, near San Antonio, and is negotiating for the transportation of its Church & Fields production by Humble Pipe Line Company on a common carrier basis as far as Lytle station, and the former will build a 16-mile three-inch line from Lytle to the refinery.

Humble Increasing West Texas Line Capacity

San Angelo, Texas.—Humble Pipe Line Company is adding four new mainline stations on its original West Texas trunk line system, extending from Kemper to Comyn, in order to boost the capacity to 50,000 barrels daily, or 10,000 barrels above the present capacity. The new stations are to be equipped with Byron Jackson motor-driven centrifugal pumps, and contracts for electricity have been made with the West Texas Utilities Company.

The Kemper-Comyn trunk line unit is approximately 190 miles in length, and is made up of two eight-inch lines, with an additional loop of 19 miles extending east from Kemper. Connection with the company's original Central Texas system is made at Comyn.

Construction crews are now breaking ground for the new stations to be located about midway between Kemper and San Angelo stations; near Miles and between San Angelo and Ballinger stations; between Ballinger and May stations; and between May and Comyn stations.

Materials were purchased about January 15, by Humble Pipe Line Company to boost the capacity of its Kemper-Ingleside combination 10- and 12-inch trunk line between Lytle station and Ingleside about 20,000 barrels daily, making the new capacity 90,000 barrels daily. The company's West Texas pipe line capacity will be rated at 140,000 barrels daily upon the completion of the above two enlargement programs.

Houston.—Humble Pipe Line Company last week ordered steel materials for five 80,000-barrel storage tanks, which will be erected at the Ingleside tank farm, site for Humble's terminal handling West Texas crude.

Great Falls, Mont. — Continued cold weather and snow has kept the operations in the Kevin-Sunburst field at a standstill. Plans for early spring and summer drilling, however, are most extensive and this field will see considerable activity as soon as the weather moderates.

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Gulf Coast Field Developments

JACK LOGAN, *Staff Representative, Houston, Texas*

Development of Clay Creek Field Conservatively Conducted

BRENHAM, Texas.—Voluntary production restrictions are being carried out by the Sun Oil Company in connection with the development of Clay Creek shallow dome in Washington County, where the company is in complete control of a prolific pool located near the center of a 10,000-acre leasehold. Oil production, as proven, centers on a number of small odd-shaped tracts that require an unusual number of offsets, with six completions credited with a combined daily potential of approximately 10,000 barrels of 24-25 gravity oil daily from the 1200-foot sand horizon. Although from three to five rotary rigs are to be kept busy in outlining the oil producing area, officials of the company have announced that production will be held in check until the general crude situation improves.

Daily production on Clay Creek dome is restricted to about 1600 barrels, and in quality it compares favorably with the usual Gulf Coast grade "B" crude. Sun Oil Company is transporting the oil through a six-inch four-mile line to a tank car rack at Gay Hill, on the Santa Fe Railroad, to its export terminals near Smiths Bluff for coastwise shipment to the Atlantic Coast. A freight rate of 10 cents per 100 pounds has been posted on this rail movement to tidewater. However, when market conditions and potential production justifies the investment, Sun Oil Company plans to build a direct line from this field to tap its Gulf Coast pipe line system, as only about 80 miles of line would be required. Royalty owners are being paid 85 cents per barrel for their oil.

Map shows a portion of the large block of leases held by the Sun Oil Company around Clay Creek field, Washington County, Texas

The Clay Creek field is generally accepted as being an interior salt dome, located about 12 miles north of Brenham, and was opened in the first week of last September by the second test drilled. The Sun Oil Company became interested in the area, and blocked the acreage on surface geology, and prior to completion of the first producer the presence of a dome was indicated by the sinking of five core tests to depths ranging from 300 to 1200 feet. Water samples checked favorably, while geophysical tests served to confirm the presence of an upheaval.

Started Last April

Sun Oil Company's first wildcat efforts on the Clay Creek drilling block was started in April, 1928, on the Wm. Schirmer 85-acre tract. This rotary drilled hole cored a number of horizons showing evidence of oil, but not in commercial quantities, and developed a crooked hole that resulted in it being ordered abandoned at 4271 feet in August, 1928. The next operation was made on the Geo. F. Grote 75.22-acre tract, with location about 2000 feet north and 45 degrees west of the Schirmer failure, and a gas blow-out with an estimated flow of 40,000,000 cubic feet was encountered at the 974-foot level. Deeper drilling resulted in the discovery of the first oil in commercial quantities in sand at 1140-54 feet, thus marking this test as the discovery well of the field. Grote 1 flowed 65 barrels daily by heads. Grote 2, located 688 feet northwest of the discovery well, was drilled in November 11, or within a month after the discovery

LOG DATA ON WELLS IN CLAY CREEK POOL, WASHINGTON COUNTY, TEXAS

The following table covers important details on all tests made to date by the Sun Oil Company on its large block of leases overlying an interior salt dome:

Farm & Well No.—	Sur. Elev.	Date Spd.	Producing Horizon	Total Depth	Date Comp.	Initial Prod.	Remarks or Prod.
R. Carraway 1	275	2-18-29	....	....	....	...	Cem. Sur. cas.
C. Eimann 1	297	11- 8-28	....	2710	2- 9-29	...	Dry & Abn.
C. Eimann 2	288	2-18-29	....	....	....	...	Cem. Sur. cas.
Geo. F. Grote 1	295	9- 4-28	1140-1154	1154	10-15-28	75	....
(Deepened No. 1) ...	...	11-28-28	1140-1358	1474	12-26-28	650	*
Geo. F. Grote 2 . ..	279	10-23-28	976-1392	1392	11-11-28	4,000	290*
Geo. F. Grote 3	295	1- 5-29	906- 969	969	1-12-29	40,000	Ft. gas
Geo. F. Grote 4	285	....	....	....	....	...	Lcn.
Geo. F. Grote 5	275	2- 7-29	936-1192	1192	2-24-29	1,500	....
Mrs. J. Grote 1	271	12-28-28	1230-1289	1385	1-31-29	5	....
Mrs. J. Grote 2	278	2- 9-29	....	1340	....		Coring
C. H. Marcus 1	275	1-24-29	910-1259	1259	2- 9-29	1,000	650*
L. Marcus 1	247	10-29-28	....	3640	2- 9-29	...	Dry & Abn.
W. Schirmer 1	315	4-28-28	....	4271	8- 1-28	...	Dry & Abn.
H. Witt 1	277	1- 3-29	1121-1250	1250	1-29-29	5,600	860*

*Production pinched.

of the oil, and registered an initial flow of 4000 barrels at 976-1392 feet. This heavy flow resulted in the discovery well being ordered deepened. However, the discovery well encountered water when carried to 1474 feet, and resulted in a 650-barrel daily producer when plugged back to 1358 feet.

H. Witt 1, a northwest diagonal offset to Grote 2, furnished the largest initial production for the field when it was completed January 29 flowing 235 barrels of clean oil per hour on a three-hour gauge from sand at 1121-1150 feet.

Efforts of the Sun Oil Company to give the producing area a wide extension to the east and southwest of production failed in the drilling of C. Eimann 1 and L. Marcus 1. The latter having been abandoned at 3640 feet, and the Eimann 1, located to the east of production, was abandoned at at total depth of 2710 feet.

Considerable trouble has been encountered with producing wells sanding up when flowed open, as the oil bearing sand is soft and in very fine grains.

All recent tests drilled by Sun Oil Company have been cored from the 500-foot level to the pay level, because of the difficulty in identifying the key formations overlying the oil pay. Cores are analyzed by palentologists to determine whether the tests log the key formations high or low, and in this manner the drilling crews are guided on making their casing seats.

The Clay Creek field is easy digging for a light rotary, and average drilling and completion time on the shallow wells can be accomplished within two weeks. All rigs in use are owned and operated by the company. The cost of completing a well ranges from $6,000 to $7,500, as the casing cost is held to a minimum through the setting of a short string of surface pipe, and a string of 6⅝-inch pipe on top of the producing horizon.

The producing area is isolated from town, so a comfortable camp has been erected on the ground for the employes, with all modern conveniences. Gas for domestic fuel is supplied from a shallow gasser drilled near the discovery well. H. C. England is superintendent in charge of drilling and production, and mail is received at Brenham.

Eleventh Successful Well at Sugarland

Houston.—In the west end of the Sugarland field, Fort Bend County, Humble Oil & Refining Company has completed Deatherage 2 as a 500-barrel well at 3760 feet. This well is the most westerly in the field, with the exception of Deatherage 1; and it is located about midway between Deatherage 1 and Sugarland Industries 3. One of the two locations which Gulf Production Company recently made at Sugarland, Deatherage 1, is 1000 feet due north of Humble Oil & Refining Company's Deatherage 2.

With completion of Deatherage 2 as a producer, Humble Oil & Refining Company has enlarged upon the already unusual record of the Sugarland field. Deatherage 2 is the eleventh test completed in the field, and not one out of the whole eleven has been a failure. Ten have been brought in as oil producers, and the other was completed a gas well.

Abandon Sixth Test on Black Bayou Dome

Houston.—Shell Petroleum Corporation has abandoned its sixth test on the Black Bayou dome, Cameron Parish, Louisiana — Watkins 7. The drill was stopped in cap rock at 936 feet, the top of the cap being at 931 feet.

Black Bayou dome was discovered and outlined through seismograph work, and the first test proved the existence of the dome. That first test, Shell Petroleum Corporation's Watkins 1, located in Section 8-12s-12w, had sand with oil and gas odor at 490 feet, passed through cap rock and into salt in which it was abandoned at 1700 feet. It started drilling in March, 1928.

On this same dome Shell Petroleum Corporation is down 3092 feet in sand in Watkins 6, and is moving in foundation material for Watkins 8, the latter being in Section 18-12s-12w.

Sweet Lake

Houston. — Pure Oil Company has completed Yount-Lee Oil Company 8 at Sweet Lake, Cameron Parish, Louisiana. This makes a total of six tests in that field, out of eight drilled, which have been brought in as producers.

Yount-Lee 8 came in Monday night, February 25, and made 230 barrels during the first 12 hours, the production being 28.5 gravity oil. The pay sand is at 4457-75 feet, and casing is set at 4440 feet.

Pure Oil Company's Yount-Lee 7, which came in on February 4 at 4594 feet, making around 1000 barrels of 29 gravity oil, soon afterward sanding up, has not yet been brought back. On Tuesday of this week it was being washed, after setting liner on top of the screen.

Another "Well In One" Proves Geophysics Dependability

HOUSTON.—For years it has been the dream of scientists in the oil industry to find means of locating oil definitely before drilling for it; and for years such ideas were generally considered only as idle day dreams. But the scientists' dreams are now coming true, at least to a certain extent; and particularly in the Texas and Louisiana Gulf Coast Country.

Last week another geophysically discovered salt dome, Port Barre in St. Landry Parish, Louisiana, was opened for production through the first test drilled on it. Less than a year ago there was a similar situation in the Texas Gulf Coast, when the Sugarland was opened through completion of the first test as a good well, following discovery and outlining of a deep dome by torsion balance. The Port Barre dome was discovered not by torsion balance but by seismograph, however. It was outlined as a dome by the Gulf Refining Company in 1926.

Other domes in South Louisiana, found by seismograph instruments, and proved for production through little drilling, include East Hackberry (Kelso Bayou), Cameron Parish, where the first test cratered and the second came in for 2000 barrels at 4000 feet; and Sorrento, Ascension Parish, where the first test cratered and the fourth came in for an estimated 7000 barrels.

The oil producer at Port Barre is The Texas Company's Botney Bay Lumber Company Fee 1, located 8100 feet south and 3200 feet west of the northeast corner of T-6s; R-5e. The total depth of the hole is 3763 feet. Eight and one-quarter-

inch casing was set at 3717 feet over sandy shale showing oil, the pay being topped at 3729 feet. The plug was drilled, and the open hole bailed, no screen being set. The well came in showing approximately 8,000,000 feet of gas, and making pipe line oil, 23.5 gravity, at the rate of 800 barrels a day, flowing through a three-eighths-inch choke. After several hours, however, the well quit flowing, presumably on account of sand trouble. Reports in Houston Tuesday showed preparations being made to set screen, with the expectation of again making the well flow.

Port Barre dome is in the south central part of St. Landry Parish, and is the first commercially productive oil area in that Parish. It is also one of the most northerly of the Louisiana salt dome fields. It is approximately 18 miles north of Anse La Butte, which has produced oil in commercial quantity; and is about 20 miles northwest of Bayou Bouillon dome, St. Martin Parish, which was opened for commercial production last spring.

Hackberry Dome

Houston.—The only completion during the past week in the newly productive Hackberry field, Cameron Parish, Louisiana, was Yount-Lee Oil Company's R. Vincent 1, located in the south part of the field. It was abandoned at 4150 feet in heaving shale.

This well is approximately 500 feet south and 500 feet east of Sanner 1 of Seiss-Green & Sutton (now Moon Oil Company), which was completed about February 15 for 800 barrels of 23.8 gravity pipe line oil at 3158 feet. The foot measurements of the Yount-Lee Oil Company abandoned test are: 1836 feet east and 995 feet north of the southwest corner of Section 28-12s-10w.

The discovery well of the old Hackberry dome, Cameron Oil Company and Rycade Oil Corporation's Duhon Joint 1, is pumping 200 barrels per day; and the above mentioned Sanner 1 of the Moon Oil Company is flowing. The third completed producer at Hackberry, and the only other of the field as yet, Rycade Oil Corporation's Humble-Gulf Land 1, was running in sucker rods on Tuesday of this week. Rycade Oil Corporation's Humble-Gulf 2, offsetting No. 1, at the same time was drilling at 1240 feet in gumbo. These wells are on the west flank of the dome.

Raccoon Bend

Houston. — Humble Oil & Refining Company completed J. C. Walton 2 at Raccoon Bend, Austin County, at 3272 feet for an initial production of 300 barrels of pipe line oil, 32.4 gravity, 65 degrees temperature.

This well is an interesting one in that it also made some oil from a total depth of 2226 feet early in January, this year. Nine and five-eighths-inch casing was set at 2195 feet. At 2213-26 the test had a good showing of oil in a sandy shale. At that level the well was swabbed and produced at the rate of 125 barrels of fluid, two per cent. water and 20 per cent. basic sediment.

Gulf Ahead of Season With Gasoline Order

Fort Worth. — Gasoline purchases aggregating approximately 600 cars were made within the past 10 days by the Gulf Refining Company from independent plant owners in the North and West Texas refining centers, with a portion of the order being shared in by refineries at Shreveport. This quantity buying is the first of any consequence made this year. And has had a stabilizing effect on the gasoline market, but owing to the orders being scattered prices have not advanced. Gulf Refining Company is a frequent buyer of gasoline from interior plants in Texas during the early spring and summer months, but is getting an earlier start this year. The product purchased must meet the U. S. Motor specifications, and deliveries are to be made within 30 days.

The above gasoline order has served to halt the downward trend of prices on motor fuel in North Texas, and the position of the independent refiner has lately been improved through a slight advance in quotations on distillates, kerosene and gas oil. The better grades of kerosene are netting the plant owners about 5½ cents per gallon, while gas oil is scarce at 3 cents per gallon, with distillates a cent higher. U. S. Motor gasoline in North Texas is being sold at 6⅛ cents per gallon, although that bought by Gulf Refining Company was about ⅛ cents per gallon below the spot market quotation.

North Texas fuel oil is hovering around the 70 cent price per barrel.

Hendrick Oil Movement Hangs on Rate

San Angelo, Texas.—American Petroleum Company, crude purchaser and marketing subsidiary of the American Republics Corporation, has contracted to sell 1,500,000 barrels of Hendrick field crude to the Louisiana Oil Refining Corporation to be delivered in tank cars from the American rack near Pyote to the purchaser's refineries at Shreveport, Louisiana. Actual consummation of this deal hinges on the establishment of an 18-cent per 100 pounds freight rate between Pyote and Shreveport, with the Texas & Pacific Railroad making the entire haul. Plans are to start shipments about March 1, and contract calls for maximum deliveries of 5000 barrels daily.

The American Petroleum Company has a six-inch line from the Hendrick field to the rack, and is handling all oil produced by the Republic Production Company, an affiliated concern, and recently made contract to purchase 1,000,000 barrels of Hendrick crude from the Murchison Oil Company and Cranfill Brothers Oil Company, joint operators, at five cents below the market price prevailing from day to day, with a maximum of 4500 barrels daily deliveries. American Petroleum Company sold more than 2,500,000 barrels of Hendrick field crude to Louisiana Oil Refining Corporation during 1928, deliveries at maximum rate of 7500 barrels daily at a sliding scale price, based on the average postings in the field from day to day. This conract expired early in January.

Start Tests in Ozarks of Arkansas

Tulsa.—Independent Oil & Gas Company is spudding Banks-Teague 1, NEc Section 16-17-27, 25 miles east of Fayetteville, in Madison County, northern Arkansas. This is a rank wildcat in the Ozarks Mountains. The nearest test well to the block was drilled five or six miles southeast in the Bohanan Mountains. A good showing of oil and gas was reported around 2000 feet, which was thought to be the Wilcox sand.

A. I. Leverson, chief geologist of Independent Oil & Gas Company discovered the structure upon which the new wildcat test will be drilled, while on a pleasure trip near Fayetteville. The company for several months has been busy assembling a block of acreage and now has nearly 15,000 acres in a solid block.

Long Beach Production Still Holding Up

Los Angeles.—Long Beach continues to show resistance to a further decline, production holding around 180,000 barrels, after dropping to a lower figure during previous weeks. The field is passing through a period when production will show only slight changes. The older wells are settled and show only nominal declines, while the new wells are large enough to maintain the field total. The best completion of the week, and now the largest producer in the field, was the California Western Oil Company's Darby 4, which came in with an initial production of 2700 barrels. The flow has increased to 3800 barrels. Gas production is also unusually high.

Wyoming Royalties Show Market Condition

Casper, Wyo.—Royalty receipts from oil, gas and natural gas gasoline from leases on the public domain for 1928 were nearly $400,000 less than in 1927. This does not mean that there is less oil or gas, but that there was less produced; this was on account of the overproduction in other fields, and a low price for some of the product during a part of the year. The following comparative table shows the amounts collected on each production in 1927 and in 1928.

	1927	1928
Oil	$3,232,210.36	$2,854,802.80
Gas	101,730.81	116,661.05
Gasoline	109,691.71	85,580.43
Total	$3,443,632.88	$3,057,044.28

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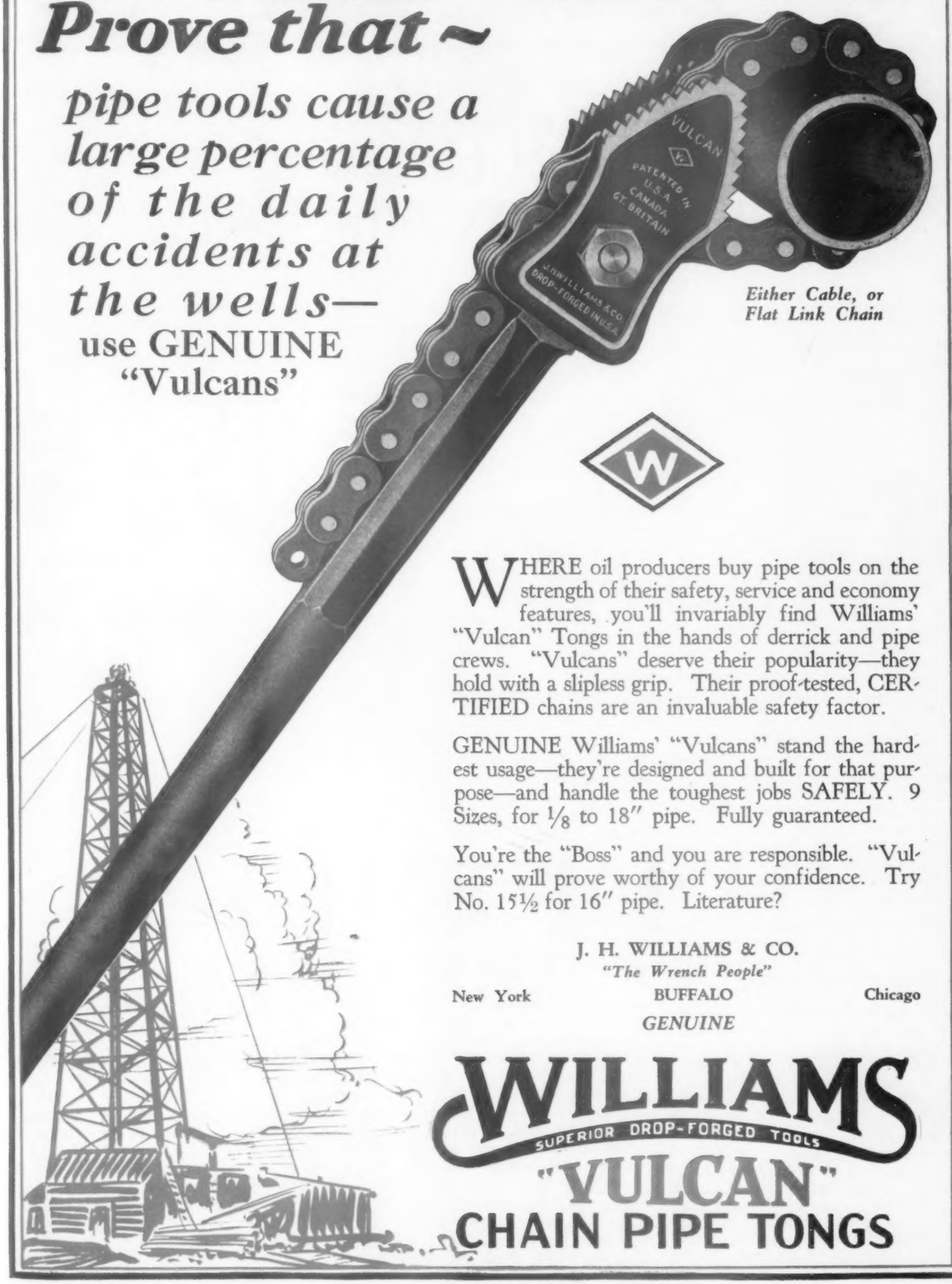

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News From California Fields

BRAD MILLS, *Staff Representative, Los Angeles, California*

Have Hopes of Handling Water Problem in O'Connell Sand

LOS ANGELES.—Failure of the discovery well in the O'Connell zone to produce satisfactorily, a slower field decline than was expected, a flock of new completions which sent production soaring to new heights, and an unusual interest in the possibilities of the new Clark zone, kept the best talent guessing during the week as to what should be expected next from the Santa Fe Springs field.

The disappointment following the production test of George F. Getty's O'Connell 19 was tempered by conditions which are supposedly causing the well to flow only 900 barrels of oil and fully twice as much salt water. Drilled to 6610 feet and with a full 250 feet of oil sand included in the production test, a much better performance was expected. It was necessary to swab the well only twice to bring it in, proving that the new sand has the necessary life.

A study of the log shows that streaks of very lean oil sand were cut just below the shale body in which the shutoff was effected. The theory now is that the sand contains water and it will be necessary to shut off below this point to obtain clean production. The salt water tests 1120 grains to the gallon, identifying it as an entirely new water, since no other well has shown such a strong salt content.

The fact that the oil and water separate immediately after reaching the tank also speaks well for the new zone and virtually proves that clean oil is possible if the proper shutoff is accomplished. Despite the high water production, the oil is 34 gravity and shows only a small additional cut. The well will be allowed to produce at least until something further is learned of the O'Connell zone. If adjoining wells secure a better shutoff, steps will be taken to improve the status of O'Connell 19. The heavy flow of water is a hindrance, but its quick separation from the oil makes the well a fairly profitable producer as it is. The question of a better shutoff is a difficult one, because of the depth of the well and the small string of casing now cemented. Cores show that the water is not coming from the bottom of the sand.

George F. Getty's O'Connell 19 tapped the new zone at 6305 feet and cored continuously in oil sand for 300 feet. The discovery was heralded as a possible means of increasing field production, as well as a source of revenue for operators who were unfortunate enough to have missed the Buckbee zone. The thickness of the zone indicated a better formation than the Buckbee has proved to be, but such a condition may not develop. While coring in the new sand, it was necessary to use hematite almost continuously.

A slower field decline, coupled with the completion and re-completion of 17 wells, was reflected in a higher field production, actual runs at the end of the week standing at 204,000 barrels. This was a distinct surprise and closely followed the announcement that the peak probably had been reached. The decline per well was slower than during previous weeks, offsetting the slightly lower average initial production of the 17 new wells.

Completions during the past week did more to define the producing limits of the Buckbee zone than those finished during any previous week. Some of the new wells were very small, proving that they were located on the very edge of production.

Clark Zone

The eyes of those who missed the Buckbee zone are centering on the possibility or production in the Clark zone, which is found about 550 feet below the top of the O'Connell zone. More than 25 wells are headed for the deepest known zone and all have satisfactorily passed the Buckbee sand. Among the deepest wells now drilling for the sand are Standard Oil Company's Jordan 8 at 6300 feet and Carter 1 at 6450 feet and General Petroleum Corporation's Jalk 111, now coring at 6775 feet. Both of these wells either missed the Buckbee zone or found it unprofitable to produce from at any depth. The partial failure of the Getty discovery well in the O'Connell zone has had little effect on the efforts to reach the deeper Clark sand.

Although too early to make definite statements, the O'Connell zone is almost sure to be much smaller in lateral extent than the Clark sand, and probably will prove even smaller than the Buckbee zone. These deductions are made because one of the two wells that found the Clark zone missed both the O'Connell and Buckbee zones. Another well which cut only a thin body of Buckbee sand has found some oil in the O'Connell zone. The Clark zone probably will roughly parallel the Meyer sand.

The result of the test in Richfield Oil Company's Elliott 2 will be very important and should disclose the fate of many operators holding leases not productive in the Buckbee zone. This well found the Clark sand around 7100 feet and will test more than 75 feet of fair formation. The well was drilled to 7195 feet, plugged back to 7183 feet for a test, and re-plugged to 7165 feet when it was found that the original plug had failed to hold. Thin streaks of gray or water sand were found near the bottom of the hole and it was necessary to eliminate these streaks before continuing the test.

Associated Oil Company has reached the remarkable depth of 7750 feet in Clark 2, discovery well in the Clark zone but which did not cut sand enough to test. Even at this great depth excellent cores are being taken. The formation is running to brown shale, ordinarily considered a favorable condition. Clark 2 is located in the extreme northwestern part of the field and found no trace of the Buckbee or O'Connell zones.

Failure of George F. Getty's O'Connell 19 is directly responsible for the suspension of operations in several wells which will be deepened to the new zone when a more favorable turn is evidenced. Several of these wells showed little life in the Buckbee zone, although located near enough to the apex to catch all deeper zones. Of the 30 wells drilling below the Buckbee zone, few are primarily headed for the O'Conenll zone.

California Eastern Oil Company's Santa Fe 2, which failed to produce in the Buckbee zone, is coring in good oil sand at 6700 feet. The top of the O'Connell zone was gray sand but further coring revealed a good oil sand. An attempt will be made to produce the O'Connell zone in this well at a point below the bottom of the discovery well, or only the bottom layers. A body of shale suitable for cementing

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a string of casing has been penetrated. This well is located in the southwest sector, where the Buckbee sand has failed to yield a satisfactory producer.

The most interesting completion of the week in the Buckbee zone was Union Oil Company's Bell 38, which came in with an initial production of 3700 barrels of oil and 45 million cubic feet of gas. About 500 feet of formation was included in this well, which was finished at 6020 feet. The penalty for including every possible foot of the zone was a cut of 19 per cent. It had been previously proven that bottom water should be expected in the bottom of the sand.

A survey at the end of the week showed 174 drilling wells, 35 active locations and rigs, 12 wells cemented over and seven ready to complete in the Buckbee zone, four cemented over the Intermediate zone and 100 producing wells in the deep zones.

Peak production from the Buckbee zone certainly should not go much higher, with less than 20 wells ready for completion during the next two weeks.

West Midway

Taft, Calif. — The threat of a large production from a deeper sand in the West Midway district has not completely passed, but interest in the area has reached the lowest point in months. Republic Petroleum Company, discoverer of the deep sand on Section 8-32-23, has another well ready for completion in the formation which offered more than usual promise, only to suffer a series of relapses. T. H. Purman, drilling just outside of production, is seeking the deep sand on Section 12-32-23, having failed in the upper sand around 900 feet. Several wells are shut down and will not be started until more favorable developments in adjoining tests.

Seal Beach

Los Angeles. — Three good completions in the Seal Beach field, which two years ago was the most feared area in California, brought production up 3500 barrels and restored the main field to its status of two months ago. The wells completed were Marland Oil Company's McGrath-Selover 20, a 1500-barrel producer from 5420 feet, and McGrath-Selover 15, which was recompleted at 6875 feet with an initial production of 800 barrels, and Standard Oil Company's San Gabriel 2, a workover which was re-completed at 4960 feet for 1200 barrels. Production in the townlot sector has dropped to 7500 barrels from 82 wells, as compared with a peak of 50,000 barrels 18 months ago. Nearly all drilling in the future will be done in the main field, which is controlled exclusively by Marland Oil Company, Associated Oil Company and Standard Oil Company.

Kettleman Hills Busy With Preliminaries

Coalinga, Calif. — Kettleman Hills presents a very busy appearance, but the chief energy is being expended toward preliminary operations more than in the actual making of hole. The rough country demands a foolproof system of roads, while water and electric lines must be constructed before much drilling is done.

Standard Oil Company, owner in fee of more than 33,000 acres on the structure, already has assumed the leadership in the new field, having started drilling in three wells and located four more. The company's No. 81 has passed 3900 feet, with two other wells approaching 2000 feet.

General Petroleum Corporation is redrilling at 6500 feet in Oeschner 2 and should be the next company to reach the sand from which the discovery well is producing.

Marland Oil Company has started three wells on Section 2 and 12-22-17, all located on the north dome.

Other companies that have started operations include the Shell Oil Company, George F. Getty, Inc., Milham Exploration Company, E. J. Miley, Ohio Oil Company, Petroleum Securities and Associated Oil Companies.

Los Angeles Wildcats

Los Angeles. — Important wildcat tests in the Los Angeles Basin showed little change during the week. The failure two weeks ago of the Richfield Oil Company's test at Puente left no wildcats of more than ordinary importance. The Texas Company has reached 4000 feet in Crawford 1, an interesting test near Garden Grove, but developments have been disappointing. Rio Grande Oil Company has met with no more success than others that have drilled near Downey, an area lying a few miles northeast of Santa Fe Springs. Richfield Oil Company's test at Vernon, just east of Los Angeles, is drilling below 4700 feet, with no showings of importance.

Lawndale

Los Angeles. — Several wells in the Lawndale field are approaching the oil sand and it should soon be possible to tell whether the discovery well opened up a large producing area or merely indicated the presence of a tricky structure. Building their hopes on one very small well and another now producing 650 barrels, operators continue to start wells at record rate. The number of drilling wells has increased to 50, with 40 active locations. Standard Oil Company has cut several stringers of oil sand in Vance 1, which has passed 5640 feet to become the deepest drilling well in the field. Superior Oil Company has reached a depth of 5400 feet, with the formation running to brown shale and streaks of oil sand. Richfield Oil Company has not picked up important showings in either Paul Howard 1 or Intercity 1, although both are drilling below 5250 feet. Several other wells are nearing 5000 feet. If a large production is developed, it will come almost all at once. Fully 50 wells should be completed during a period of two months.

Outpost Wells at Elwood Appear Badly Located

Santa Barbara, Calif. — Rio Grande Oil Company and Barnsdall Oil Company are preparing to complete Doty 3, which should be the seventh producer in the Elwood field. The well is considerably lower on structure than previous completions but is well within producing limits.

The outpost well have passed 5000 feet and are apparently out of the running, unless a deeper sand is found.

J. E. O'Donnell's Campbell 1 is drilling below 5300 feet, or more than 2000 feet lower than the level at which production was found in the field, while Petroleum Securities Company's Storke 1 is approaching 5100 feet without results. Elwood Consolidated Oil Company found streaks of oil sand in Rekar 1, which is located on a separate structure, but has made no test of the formation. Other outpost wells are drilling more than 1000 feet deeper than the discovery well in the main field.

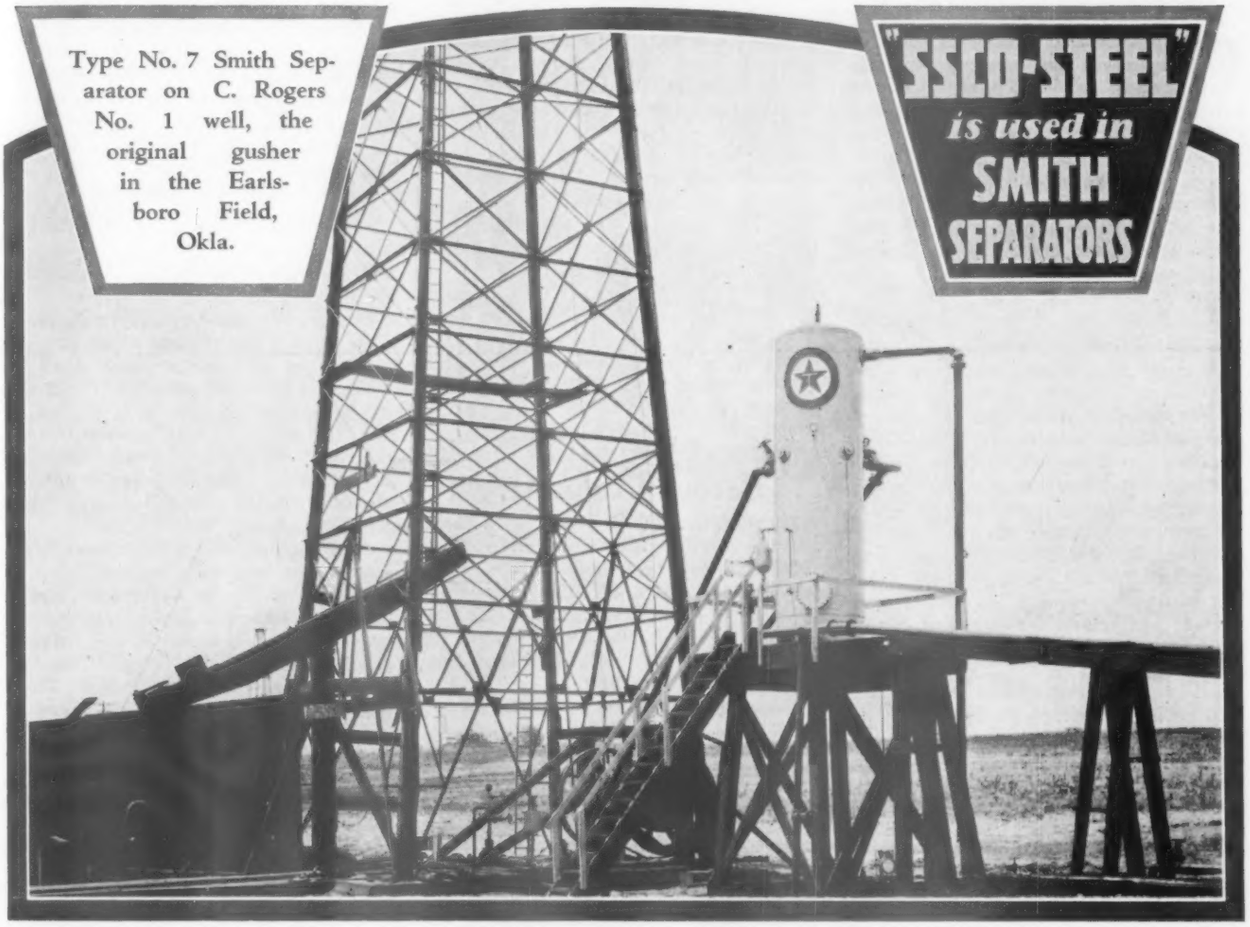
Ventura

Ventura, Calif.—Reversing the policy adopted some time ago in the Ventura field to complete wells as deep as possible, Shell Oil Company has completed Taylor 23 as a 1900-barrel well at only 6403 feet. This is about 1000 feet shallower than recent completions which produced less oil. The tendency toward deeper drilling was rapid and completions up to 7600 feet were effected with much success. With 2000 feet of oil sand, completions depths are expected to vary, since the novelty of seeking the 8000-foot level has passed.

Ventura, Calif.—Chances for deep sand production in the Rincon field have about gone glimmering, Richfield Oil Company having passed 7375 feet in Hobson Fee 1. The formation is sandy shale and seems to offer little more hope than the strata cut higher up.

Carpenteria, Calif. — Continental Oil Company has succeeded in pulling the drill pipe from Franklin 1, a wildcat test near this place which has developed a very high gas pressure between 3500 feet and 3990 feet. The hole will be reamed from 3880 feet to bottom, preparatory to running a string of 8⅝-inch casing.

"If it's worth drilling for, it's worth saving"


Type No. 7 Smith Separator on C. Rogers No. 1 well, the original gusher in the Earlsboro Field, Okla.
"SSCO-STEEL" is used in SMITH SEPARATORS

AFTER A YEAR AND A HALF of service this Smith type No. 7 Separator is still functioning as perfectly as the day it was set up. When the well was drilled in on July 6, 1927, it made 13,500 barrels of oil and 6 million feet of gas. It is still producing 2,500 barrels daily, with a considerable amount of gas.

While not unusual in any sense, compared with many other Smith Separator installtion records, this particular case does serve to emphasize the remarkable logevity and faultless performance built into every Smith Separator. "SSCO-STEEL" adds years of service to these more efficiently designed Separators, affording greater returns on the investment over a longer period of time.

Any Smith Separator Company representative will gladly give you complete details of how Smith Separators can save money on every well by putting casinghead gravity crude into the stock tanks, delivering clean gas to plant, and materially reducing fire hazards. Or write for illustrated catalog.

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HOUSTON FORT WORTH SHREVEPORT LOS ANGELES

Say you saw it in The OIL WEEKLY

Oklahoma Independents Make Plea for More Oil

OKMULGEE, Oklahoma.—Relief through tariff legislation on foreign crude oil is being sought by the Independent Oil Association of Oklahoma. This organization has drafted a resolution, addressed to President Coolidge, president-elect Hoover, the present and incoming vice-presidents, members of the finance committee of the United States Senate, members of the ways and means committee of the House of Representatives and each member of the congressional delegation from Oklahoma.

A tariff rate of not less than $1.00 per barrel is sought in the resolution, which states in effect that the American petroleum industry is the greatest industry, the labor and capital of which has been forced to compete with a raw product imported into this country without a protective tariff. Further, that the quantities of foreign crude imported into this country in past years has made it necessary to restrict production and retard development of our natural resources. The resolution points out also that foreign crude is of small gasoline content and must therefore be mixed with high grade American crudes to obtain best results, obviating any fear of a tariff augmenting the building of refineries in South America and other oil producing countries and exporting to European markets in competition with the United States.

A convincing argument in the resolution states that only 16 million barrels of crude were run to storage during 1928, indicating that if 80 million barrels of imported crude had been shut off by a tariff the United States would have had to draw upon crude stocks to the extent of 64 million barrels, or produce additional crude to meet the demand, thereby stabilizing the American petroleum industry.

The resolution was signed by J. G. Lyons, J. J. Callahan, M. C. French, R. D. Pine and T. T. Blakely as a committee of the Independent Oil Association of Oklahoma, of which W. E. Wood is president and C. I. O'Neill, secretary.

Marland-Shreveport Deal Rumor Denied

Shreveport, La.—Official denial was made Monday by M. J. Grogan, vice president of the Louisiana Oil Refining Corporation, of a sale having been made or pending with the Marland Oil Company. Published reports eminating from financial circles in New York City during the past week involved the company in a three-way deal with Marland Oil Company and the West Texas producing properties of the Moody Corporation, subsidiary of the Superior Oil Corporation.

The Louisiana Oil Refining Corporation has two refineries at Shreveport in operation, with an extensive marketing system in East Texas, Louisiana, Mississippi and around Cincinnati, Ohio, but is obtaining the bulk of its crude supply in tank cars from West Texas fields on contract. A contract was made last January with the Marland Production Company and Group One Oil Corporation (Texon Oil & Land Company), joint owners of producing properties in the Howard-Glasscock County district, West Texas, for a 12 months' supply, which will aggregate approximately 3,180,000 barrels of oil, if producers are able to maintain maximum deliveries.

Howard Urges Oil Tariff Before Committee

Washington, D. C.—Need of a tariff on imported crude oil and refined products was laid before the house ways and means committee at its final hearing on revision of the tariff February 23, by Representative Howard of Oklahoma, author of a bill providing for a duty of one dollar per barrel.

Congressman Howard pointed out that there is a difference of opinion in the industry regarding the need of a duty, but that a large part of the independent producers, farm and land owners with oil-bearing properties and communities where oil is produced, are in favor of it. He declared that it is not the refined products but 'oil for fuel which is interfering with the price of American Crude, and that if all foreign oil was shut out there would be no reason for raising the price of gasoline to the consumer. He cited the increases in the cost of developing oil properties as the reason for a duty in order that the greater expenses of drilling and producing might be met.

Imports last year totaled nearly 80,000,000 barrels, of which 7,000,000 barrels were used for fuel or other like purposes, while from the rest slightly over 7,700,000 barrels of gasoline were produced.

The imported crude is of very poor quality, Howard told the committee. There is considerable doubt as to the wisdom of a conservation policy, Howard told the committee, declaring that the oil industry has more to fear from substitutes or other sources of power not yet developed than it has from exhaustion, and that "if we too fully follow the policy of conserving our own petroleum resources by the use of foreign oils, we might some day find that we had preserved a resource now valuable that then would be of very much less value than now."

The Government itself is vitally affected by the present situation, he pointed out, it being one of the largest oil-land owners in the world. "An equitable tariff placed upon crude petroleum and its products," he said, "will bring prosperity to the petroleum interests of the United States, make sure the position and independence of the independent producer bring a very considerable revenue to the government, and extend equity and justice to the farmer on whose lands petroleum is produced and to the wage earners who depend upon the oil industry for a living."

Coal Operators Want Oil Imports Restricted

Washington, D. C.—The bituminous coal industry sees in a duty on petroleum an advance in the price of fuel oil to the consumer and an opportunity to regain in part the market which has been lost during the past few years to oil as a fuel, it is indicated in a brief filed with the house ways and means committee last week by Harry L. Gandy, executive secretary of the National Coal Association, urging that a duty be imposed not only on crude oil, but also on refined products and fuel oil.

"The interest of the bituminous mining industry in the question of the imposition of a duty on imported petroleum and petroleum products sufficient to offset, at least in part, the low cost of production in certain foreign oil fields, arises from the fact that petroleum and its derivatives constitute the most serious single competitor of bituminous coal as industrial and domestic fuel," it was declared in the brief.

"While the chief form of competition in which bituminous coal people are interested is that with fuel or crude oil used as fuel and its interest is therefore primarily in the duty on crude petroleum, it seems obvious that, in fairness to all parties interested, the protection should cover not only oil in that form, but all the refined products of distillation. To confine the duty to crude petroleum would not only let in oil from which a small portion of the lighter products have been removed by the process known as topping, but would obviously impose a hardship upon American refiners so far as they made use of crude petroleum from abroad."

The coal industry is chiefly disturbed over the rapid development in Colombia, Venezuela and the Dutch West Indies, where a "potential flood of cheap petroleum produced under low standards of living threatens to annihilate the bituminous market in those sections of the country to which that oil can be readily transported."

The effect of the duty, the committee was told, would be confined to maintaining a price in the seaboard markets directly accessible to the imported oil, which would bear the normal proportion to prices in other parts of the country. So far as competition between oil and coal for the seaboard markets is concerned, it is held, the bituminous operator would not be put in a more favored position than he has occupied in the past, but would be protected from a loss of market, the benefit of which would go entirely to the producers of cheap foreign oil.

PERSONAL MENTION-MEN YOU KNOW

H. H. Rogers, president of the Oklahoma Chamber of Commerce and head of the Exchange National Bank of Tulsa, will be the chief speaker at the annual banquet of the Chamber of Mines and Oil, to be held March 7 at the Biltmore Hotel, Los Angeles. Mr. Rogers will speak on "The Oil Man and the Banker." Gurney Newlin, president of the American Bar Association, will address the Chamber on the trend of present day laws. Special features of the entertainment program will include Calmon Lubovitski, the famous violinist; Melville Avery, baritone soloist; and the Beverly Male Quartette. Alen E. Morphy, will be toastmaster. An attendance of 1500 is expected. A large delegation from San Francisco is expected and smaller delegations from cities of the San Joaquin Valley will attend.

Hugh B. Evans, Jr., vice-president and manager of Hugh B. Evans, Inc., independent producers in the San Joaquin Valley, died at Los Angeles, February 18. Mr. Evans was a young man and had been very successful in developing wildcat acreage in the San Joaquin Valley. He is survived by his parents, Mr. and Mrs. Hugh B. Evans, Sr., his wife, Ruth Allen Evans and two children.

Ray V. Moore, formerly salesman for the General Petroleum Corporation, has resigned to become engaged in the second hand pipe, casing and oil well supply business. He will be located at 2418 East Fifty-Fourth Steret, Los Angeles.

Addison McGarrett, formerly with the Niles Tool Works Company of Hamilton, Ohio, is now with the Pratt & Whitney Company of Hartford, Conn., where he is manager of the new agency sales department of the latter company. Mr. McGarrett has been with the Niles Tool Works Company more than 25 years, of which time he spent over fifteen years traveling in New England, New York and Ohio, and five years as manager of the Rochester branch office. Robert P. Brinkman, who assisted Mr. McGarrett at Hamilton, is with him at Hartford.

Frank Stebbins, aged 71, pioneer Mid-Continent oil operator, died Saturday at Alamo, Texas. Mr. Stebbins began his oil career back in the Pennsylvania fields before moving to Tulsa.

W. O. Davis of the Baker Oil Tools Corporation, with headquarters in Houston, is now on a visit to the home office of the company in Los Angeles.

Associated Oil Company Shifts Personnel

Los Angeles, Calif. — A rather wide spread reorganization of the Associated Oil Company of California early in February better defined the various branches of activities of the company with two vice presidents in direct supervision of production, engineering, etc., while the sales department is to be handled by a committee of three. A. C. McLaughlin is executive vice president.

L. J. King continues as vice president at the head of the general production department, having under him activities ranging from production to geology. J. H. Jenkins is general manager of the producing division in addition to being land manager. J. A. Jones is production manager in charge of all drilling and production activities, with the newly created petroleum engineering department under his supervision. Joseph Jensen was appointed chief petroleum engineer with G. D. Robertson as his assistant. The scouting and statistical work is in Mr. Jensen's department.

All exploratory geological activities are under the immediate supervision of L. C. Decius as chief geologist. H. J. Steiny continues in charge of geological work in Southern California with offices in Los Angeles. J. A. Taff is consulting geologist reporting directly to the president of the company.

L. D. Jurs is vice president in charge of engineering, transportation and supplies. Under him is H. T. Earl as manager of transportation which includes pipe line department, with A. S. Jones as manager of pipe lines; marine department, with G. D. Zeh as manager; traffic department, R. Hutcherson, traffic manager; chief engineer, H. B. Haney, moved to San Francisco from Los Angeles, with H. W. Wickstrom as assistant chief engineer with offices at Los Angeles.

Sales department affairs are under the general supervision of a committee composed of L. D. Jurs as chairman, B. I. Graves and F. M. Rowles.

J. P. Edwards recently was elected as secretary of the company, following the resignation of P. G. Williams.

Tulsa.—McCulloch Oil Company and Houston Oil Company of Texas are moving from Okmulgee to Tulsa. The former will be located in the Philtower Building, while the Houston Oil Company will be in the World Building. It is understood that the Deaner Oil Company has purchased the McCulloch Building at Okmulgee.

Ray McGrew, president of the Standard Oil Company of Louisiana, Baton Rouge, was in Houston early last week.

John J. Brazill, 60 year old veteran Mid-Continent oil man, died Monday at his home in Tulsa after a short illness from influenza. After serving with several companies he joined the Prairie Oil & Gas Company in 1907, and at the time of his death was superintendent of that company's steel tankage.

Walter Meyer, chief engineer of the Atlantic Oil Producing Company, Dallas, was in Houston Monday.

Jack Mellon, sales manager of the Dunn Manufacturing Company, Oxnard, California, has returned to California after an extensive trip through the Mid-Continent and Eastern oil fields.

Glenn Garrett, head of the land and scouting department in the Fort Worth division for the Gulf Production Company, is recovering from a successful operation for appendicitis at Houston.

N. S. Longabaugh, vice-president and manager of the Longhart Supply Company, which maintains headquarters at Fort Worth, Texas, has resigned to establish himself as a manufacturers' agent, and will remain in Fort Worth. L. L. Rector, vice-president and secretary, will succeed Longabaugh as active manager.

Oil Scouts Convention at Fort Worth May 20

Fort Worth, Texas.—The executive committee of the National Oil Scouts Association of America held a meeting here February 23 and selected Fort Worth for the sixth annual convention, which will be held May 20 and 21. G. R. Nicholson, Empire Gas & Fuel Company, Amarillo, is president of the association, and R. T. Lutz, Humble Oil & Refining Company, Wichita Falls, is chairman of the executive committee.

The officers and executive committee approved suggestion made by Lutz that the association publish a monthly magazine devoted to items of interest to scouts, and the first issue will be published in time for distribution at the Fort Worth convention, with Lutz as editor. The magazine will be called "The Swab."

The following committee of Fort Worth scouts were appointed to arrange entertainment and hotel facilities for the forthcoming convention: Paul R. Martin, Pure Oil Company; Jimmie Chisholm, Eastland Oil Company, and L. W. "Buddy" Love, Empire Gas & Fuel Company.

THE NATURAL GAS INDUSTRY

Gas Convention To Be Big Affair

Pittsburgh, Pa.—According to S. W. Meals, chairman of the Natural Gas Department, American Gas Association, and E. J. Stephany, secretary of the Association, the convention scheduled to take place in Kansas City during May 6 to 9, will undoubtedly be the biggest event that has ever taken place in the natural gas industry. Already, weeks before the exhibit space allotments are to be made, numerous manufacturers have requested reservations for the exhibition of their products. The convention is to be held in Convention Hall, Kansas City, which offers ideal arrangements for exhibitors as well as ample facilities for holding business sessions of the Association.

Gas Over-Plus Increased at Santa Fe Springs

Los Angeles.—The addition of more than 100 million cubic feet of gas at Santa Fe Springs during the week brought the total gas wastage in the field to a very high figure, after it appeared that the surplus would fall far short of engineers' estimates. Plants are inadequate to handle a large part of the total production, and even if the gasoline could be extracted, it is doubtful whether a market could be found for the dry gas. The gas-oil ratio in many wells is entirely out of line, but no effort is being made to "cut back" these unruly producers.

New Companies Formed on Wyoming-Utah Line

Casper, Wyo. — Announcement has been made here of the consolidation of interests identified with the laying of the long gas pipe line from southwestern Wyoming to Utah cities into a group of separate companies which shall be entirely responsible for the whole undertaking. Interests identified with the Prairie Oil & Gas Company will have entire charge of the pipe line and the transportation of gas, interests which have previously been identified with the Ohio Oil Company will have charge of the production, and the Lone Star Gas Company and the Crawford interests will together distribute the gas to the consumer. All of these new companies will be directly subsidiary to the Western Public Service Corporation, the holding company. The Mountain Fuel Supply Company has recently been organized to have charge of the production; it will be under the direct supervision of officials who have heretofore been identified with the Ohio Oil Company. Headquarters for this company will be maintained in the Rock Springs National Bank. To this new organization Ohio Oil Company, Sormir Petroleum Company, The Texas Production Company, and the Prairie Oil & Gas Company have turned over all operations in the Hiawatha Dome or Baxter Basin districts.

The operation of the gas fields will be under a unit system, all of the leaseholders and operating companies having agreed tentatively to such a form of operation at a meeting held in Rock Spring recently. This meeting was also attended by the representatives of the United States Geological Survey, Department of the Interior.

Great Falls, Montana.—The Midwest Refining Company has acquired the holdings in the Pondera field of the Continental Development Company, amounting to all 480 acres in the heart of the producing territory. This is the second acquisition by the Midwest, the first having been the holdings of the Montana Pacific Oil Company on which the company has completed all of its wells to date. The acreage in the last transaction includes the Jones, the Gjullin, and the Wheeler holdings on Sections 9, 10, 14 and 15 respectively. Temperature in the fields has moderated to a noticeable degree and many operations which have been shut down have been able to resume.

Casper, Wyo.—The closed No. 2 Camp of the California Company in Snider Basin, southwestern Wyoming, was badly damaged last week by an enormous snow slide which carried off the boiler house and other outbuildings. This camp was closed rather early in the fall because of the futility of attempting to carry on drilling operations during the severe winter, and for this reason there was no one at the location to be hurt by the slide. Those in the neighborhood are expecting another slide soon, and are watching a huge bank which will cause it with a great deal of neighborly interest.

Casper, Wyo.—The supposed "gusher" in the Billy Creek gas field in Johnson County, Wyoming, has turned out to be a very modest-sized dry gas well. The well was a rotary test and upon bailing out fluid the gas pressure caused the well to clean itself and throw mud and some oil over the top of the derrick. This was what caused all of the excitement. Billy Creek is still a gas field, however. The well was a joint test drilled by Carter Oil Company, Consolidated Royalty Oil Company and Western Exploration Company.

Bowes Field to Supply Gas for Minneapolis Line

Chinook, Mont. — Midwest Refining Company is reported to have purchased a block of 640 acres south of this town from J. L. Sprinkle Company. The land is in the neighborhood of the Bowes gas field, and it is thought that this field will be developed to higher production as a supply for the Montana-Dakota Gas Company which plans a pipeline through Chinook to eastern points, terminating in Minneapolis. The Montana-Dakota has been dealing with the Chinook Gas Company for some time to secure the local distributing system and to hook it up with the larger system planned by it; to date there has been no announcement made concerning the outcome of this transaction.

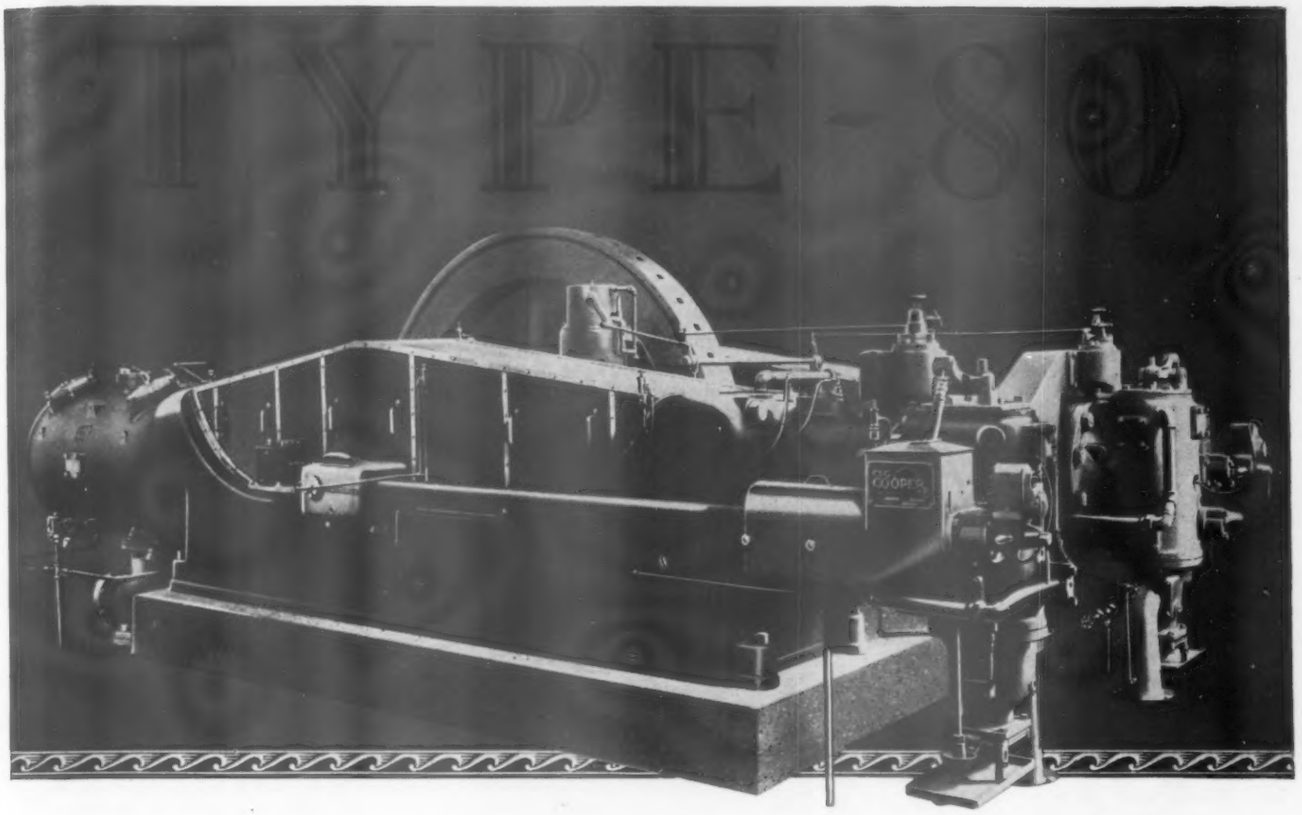
Louisiana Output Gained 51 Billion Cubic Feet

Shreveport, La.—Gas fields of Louisiana in 1928 metered 232,631,140,000 cubic feet of gas, which represents a gain over 1927 of 51,461,347,000 cubic feet, official figures recently announced by the Louisiana Conservation Commission show.

Natural gas utilized for domestic and industrial consumption in the state in 1928 totaled 134,131,140,000 cubic feet, or 58 per cent. of the total production. Consumption by carbon black plants in Louisiana amounted to 98,500,000,000 cubic feet in 1928, or 42 per cent. of the total.

Gas Dissolved By Crude Under Pressure

Washington, D. C.—Crude oils are capable of dissolving quantities of gas under pressure. Questions have arisen, however, as to the effects of gas in solution upon the characteristics of the oil. Previous investigations show that the gas in solution in an oil affects the viscosity and surface tension of the oil, but the effects on the volume and A. P. I. gravity of the oil have not been shown. Experimental findings of the Bureau of Mines, which are described in Serial 2893, recently issued, may indicate conditions comparable to those encountered in producing oils from sands. Experimental work pertaining to the solubility of gas in oil, conducted in the oil recovery laboratory of the U. S. Bureau of Mines, Bartlesville, shows that decided increases in volume and gravity of the oil are caused by the solution of gas in the oil under pressure. Conversely, decided decreases in volume and in gravity of the oil were found to take place concurrently with the liberation of gas from solution and the diminution of gas pressures.



The 1929 Cooper Type-80 Is a Still Better Gas Engine

Every year the Cooper Type-80 170 H.P. gas engine driven compressor has been improved. A number of refinements in both design and materials have been added which make it a still better value for 1929.

It will always be a four-cycle single-acting engine — simple to install and operate. Compared on the basis of fuel economy, lubricating oil consumption, installation cost, maintenance cost, percentage of hours on the load, and earning capacity, there is nothing to equal it for the service which it meets.

General managers, stockholders, superintendents, operators—no one of them ever regrets his choice of a "Cooper."

The C. & G. Cooper Company, Mt. Vernon, Ohio

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COOPER

Texas Quarter Production Brings Lowest Price

TEXAS produced more oil during the last quarter of 1928 than in any other equal period in its history. And this fact goes down in history as a sad record, for, while complete figures on crude values in the past are not available, this oil probably sold for less per barrel than the state's production has been sold since Texas entered the rank of a major producing territory.

Statistics compiled by the State Controller's department from the gross receipts tax report on crude oil show for the last quarter 68,858,209 barrels—$63,882,111. The low price return for the average Texas barrel of crude results from low prices over the state generally, but especially from the present low price of West Texas, Panhandle and fault line fields. But for the high gravity fields of North and Central Texas and the present high average of Gulf Coast crude coming in the 30 gravity class or better, the average barrel price of crude in the state would run astoundingly lower as a result of postings during that quarter.

Of this flood of oil that carried Texas' average quarterly production to a new peak there were 18 companies which recovered more than 1,000,000 barrels; 13 of this number recovering more than 1,500,000 barrels. Gulf Production Company continued to hold the lead by a wide margin, producing during the quarter 6,300,518 barrels from Texas fields. The Texas Company further widened its margin on Humble Oil & Refining Company in the fourth quarter of 1928 after establishing itself in second place among Texas producers in the third quarter. The Texas Company produced 4,067,572 barrels in the quarter, Humble Oil & Refining Company produced 3,383,655 barrels, while Shell Petroleum Corporation, Yount-Lee Oil Company, and Magnolia Petroleum Company were in the class recovering more than 3,000,000 barrels. A detailed table starting on page 85 of this issue lists these companies producing more than 1,500,000 barrels in the quarter, with their production of the four preceding quarters listed for comparison. Those companies producing more than 1,000,000 barrels but not entering the 1,500,000-barrel class during the past quarter are Prairie Oil & Gas Company, Skelly Oil Company, The California Company, Marland Production Company and Sun Oil Company. Most of these companies, like Big Lake Oil Company, Transcontinental Oil Company, Phillips Petroleum Company, Mid-Kansas Oil & Gas Company, Pure Oil Company, Atlantic Oil Producing Company, Southern Crude Oil Purchasing Company and the Shell Petroleum Corporation, attained their place among the big producers in Texas by virtue of their West Texas holdings.

The 68,858,209 barrels for the last quarter of 1928 compares with 56,842,468 barrels for the last quarter of 1927, and 53,471,631 barrels for the last quarter of 1926. During the fourth quarter of 1926 there were only 14 companies ranking in the million-barrel class as compared with the 18 companies producing that amount last quarter.

13 Companies Produce 64 Per Cent. of Oil in Oklahoma

REPORTS from the Oklahoma Corporation Commission on gross production in Oklahoma during the last quarter of 1928, shows a total output of 51,455,112 barrels by companies recovering as much as 5000 barrels. Value of this production, including gas and considering royalty reported by companies having as much as 2000 barrels, totals $88,263,678.

There are 13 companies which produced more than 1,000,000 barrels during the quarter in Oklahoma, and combined production of these companies was more than 33,000,000 barrels, or approximately 64 per cent. of the state's total for the three months ending December 31, 1928.

Magnolia Petroleum Company led the 13 leading producers with 4,825,136 barrels during the quarter. Gypsy Oil Company produced 4,342,644 barrels, the only other concern passing the 4,000,000-barrel mark. Three other companies produced more than 3,000,000 barrels, including Prairie Oil & Gas Company, 3,852,645 barrels; Sinclair Oil & Gas Company, 3,575,572 barrels; and Carter Oil Company, 3,508,225 barrels.

Independent Oil & Gas Company, one of the most recent entries into the leading 10 producers, due to its heavy production in South Little River and St. Louis fields, recovered 2,650,411 barrels during the quarter. Pure Oil Company had 1,915,527 barrels, only 2766 barrels more than T. B. Slick, Inc., production. Mid-Continent Petroleum Corporation had 1,473,696 barrels, and was followed closely by The Texas Company, which produced 1,449,662 barrels. Shell Petroleum Corporation and Barnsdall Oil Corporation were close in their outputs for the quarter, the former producing 1,378,773 barrels and the latter 1,345,610 barrels. Indian Territory Illuminating Oil Company had a total yield during the quarter of 1,239,367 barrels.

Magnolia Petroleum Company, Shell Petroleum Corporation, The Texas Company and Pure Oil Company, leaders in Oklahoma, were also among the leading 13 companies in Texas, while Independent Oil & Gas Company and Prairie Oil & Gas Company were among those companies which produced more than 1,000,000 barrels in Texas during the last quarter of 1928.

Humble Employes Stock Plan Distribution

Houston.—Humble Oil & Refining Company on February 15 distributed 43,101 shares of its stock, market value of which is now approximately $4,000,000, to 680 employees of that company and its subsidiary, Humble Pipe Line Company. Those employees are located in the company's various fields and offices throughout Texas, Louisiana, Arkansas and Oklahoma, with probably more than one-half of the distributees in the Houston office.

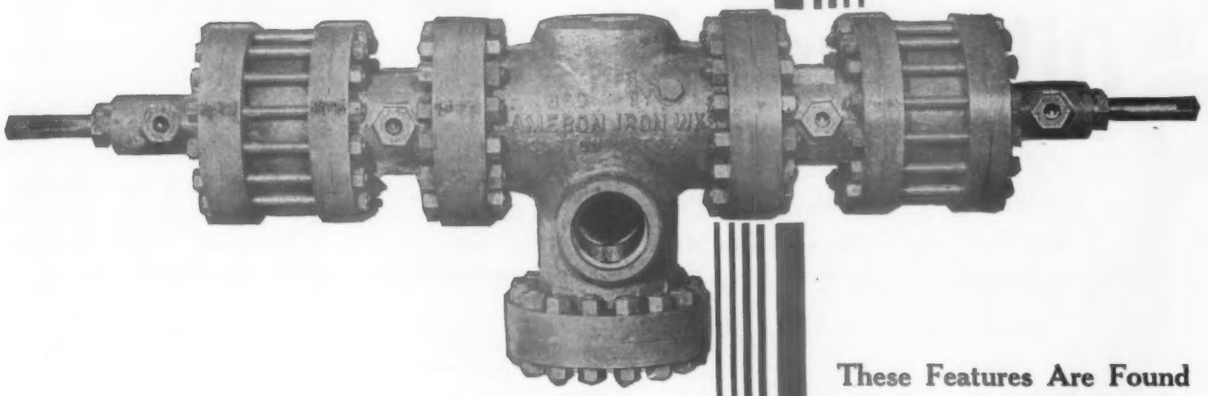
The Empleyee Stock Purchase plan under which these shares were distributed is the fifth plan to be made available to employees by Humble Oil & Refining Company. This plan, which matured on December 31, 1928, was opened in October, 1924. Employees with one year's service were permitted to make monthly payments not exceeding 20 per cent. of their salary, and for every dollar paid in by the employee the company paid in 50 cents. These funds were invested in stock of Humble Oil & Refining Company at approximately the then market prices. During the four years of the plan, the stock purchased has enhanced in value to the extent that, including the company contributions into the plan, each employee is receiving stock of the present market value of approximately three times the amount invested.

The first of the company's five stock purchase plans was offered in 1917 when the present organization was effected; Humble Oil & Refining Company being one of the pioneers in the field of offering employees the opportunity to become stockholders under favorable terms.

During the past 11 years in which employees of the Humble Oil & Refining Company have been participating in these stock plans, distribution has been made to several thousand employees, and the shares distributed have a present worth of many millions of dollars.

Several thousand employees are still participating in two stock purchase plans that will mature on December 31, 1929. These plans are administered by three trustees appointed by the board of directors of the Humble Oil & Refining Company. The present trustees are R. L. Blaffer, E. E. Townes and James Anderson.

Cameron Iron Works
STEAM OPERATED BLOWOUT PREVENTERS Never Fail!



A Vise-like Grip of Steel Against Steel Keeps the Drill Stem in the Hole.

WHEN the rams in the C-I-W Steam or Manually operated Blowout Preventer close around the drill stem there is no letting go. These two concave, steel faces form a perfect, tight fitting circle around the drill stem, through which it is absolutely impossible for the couplings to pass. The packing in the rams, form a closed double circle around the stem to prevent gas escaping.

The excellent feature of these new preventers is that the speed with which it can be closed is greater than that of the blowout. The opening of the single steam valve, which is located at some remote and convenient point from the well finally and definitely harnesses the power of the strongest gas pressures.

These Features Are Found Only on C-I-W Blowout Preventers

1. Remote Control.
2. Instantaneous shut-off.
3. Manually operated locking screws.
4. Single Valve control.
5. Flanged connection on bottom for easy installation.
6. Tested and guaranteed to withstand 2,500 lbs. pressure per square inch.
7. Closed rams, form circle of steel around drill stem securely locking it in well with the grip and action of a vise. Drill stem can not be blown from the hole.

CAMERON IRON WORKS

MFGRS. OF OIL WELL SUPPLIES & FISHING TOOLS

HOUSTON, TEXAS

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The eye is unusually large. The hook, drop-forged from manganese steel, possesses extraordinary strength. The size of the hook opening has been carefully computed to permit and facilitate the use of heavy shackle work. The absence of welding between head and rein, and perfect alignment throughout, make this without question the most *efficient* turnbuckle available for oil industry use. Large production and carefully planned shop practice make it the most *economical* as well.

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OIL COUNTRY TURNBUCKLES

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Albany, N. Y., Allentown, Pa., *Atlanta, Altoona, Pa., Baltimore, *Boston, Bridgeport, *Brooklyn, N. Y., Buffalo, *Camden, N. J., Canton, O., Charlotte, N. C., Chattanooga, Tenn., *Chicago, *Cincinnati, *Cleveland, *Columbus, O., *Dallas, *Davenport, *Dayton, O., Decatur, Ill., *Denver, Des Moines, *Detroit, Erie, Pa., Fall River, Mass., Flint, Mich., Fresno, Calif., *Grand Rapids, Mich., Harrisburg, Pa., Hartford, *Houston, Texas, *Indianapolis, *Jacksonville, Fla., *Kansas City, Mo., *Los Angeles, Louisville, Ky., Madison, Wis., *Memphis, Tenn., *Milwaukee, *Minneapolis, *Moline, Ill., *Montreal, Newark, N. J., Newburgh, N. Y., New Haven, *New York, *Omaha, Neb., Oshkosh, Wis., *Oakland, Cal., *Philadelphia, Phoenix, Ariz., *Pittsburgh, Pleasantville, N. Y., Portland, Me., *Portland, Ore., Poughkeepsie, N. Y., Providence, Reading, Pa., Richmond, Va., *Rochester, N. Y., Rockford, Ill., *Rock Island, Sacramento, San Francisco, *Seattle, Springfield, Mass., South Bend, Ind., *St. Louis, *St. Paul, Syracuse, N. Y., *Toledo, *Toronto, Trenton, *Tulsa, Okla., Utica, N. Y., *Vancouver, B. C., Waterbury, Conn., Wichita, Kan., Williamsport, Pa., Worcester, Mass.

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Industrial Cleaning Materials and Methods

Texas Quarterly Production Report Fourth Quarter, 1928

Leading Companies in Texas, Fourth Quarter, 1928

This tabulation includes companies reporting more than one and one-half million barrels for the Fourth Quarter of 1928.

	Fourth Quarter 1928	Third Quarter 1928	Second Quarter 1928	First Quarter 1928	Fourth Quarter 1927
Gulf Production Comany	6,300,385	6,250,518	6,319,764	6,585,359	5,849,223
The Texas Company	4,067,572	3,991,443	3,293,960	2,957,020	2,814,945
Humble Oil & Refining Company	3,383,655	3,464,065	4,549,109	3,895,649	2,963,199
Shell Petroleum Corporation	3,358,633	4,096,142	3,178,997	2,818,691	1,122,990
Yount-Lee Oil Company	3,210,411	3,237,565	3,148,550	2,754,357	3,363,020
Magnolia Petroleum Company	3,031,049	2,957,372	2,847,060	3,091,216	3,125,152
Southern Crude Oil Purchasing Company	2,903,917	2,606,646	2,355,767	1,371,203	847,050
Atlantic Oil Producing Company	1,853,865	2,541,758	2,811,355	1,866,747	1,956,282
Pure Oil Company	1,851,071	1,902,587	1,851,071	1,107,438	862,194
Mid-Kansas Oil & Gas Company	1,611,634	1,365,334	1,611,634	782,805	981,599
Phillips Petroleum Company	1,565,149	1,630,937	1,689,924	1,884,085	2,192,109
Transcontinental Oil Company	1,559,865	1,355,850	879,826	796,375	995,333
Big Lake Oil Company	1,534,944	1,284,335	1,253,037	1,428,501	1,517,868

Total Texas, Fourth Quarter 68,858,209
Valued at $63,882,111

Gross Receipts Tax Report on Crude Oil.
Production in Texas for Quarter Ending December 31, 1928

Name, Address—	Barrels	Value
Andrews, W. H., et al, (9-30-28), Putnam	1,356.90	1,889.47
Perer Adamson, Jr., (9-30-28), Tulsa	1,616.67	33,186.56
Artex Oil Co., Wichita Falls	2,124.80	3,209.30
Alamo Oil Co. Brownwood	429.00	583.00
Arnold, J. L., et al, Eastland	2,658.31	33,171.66
Ama-Gray Oil Co., Amarillo	4,229.33	5,208.22
Acorn, Beaumont	5,988.23	7,185.88
Ada Belle Oil Co., Boston	24,448.43	29,548.45
A. & P. Production Co., Houston	60,864.61	75,075.16
Atlas Oil Corp., Humble	2,588.00	3,106.00
Alamosa Oil Co., Amarillo	24,228.63	22,182,53
Alaska Petroleum Co., Amarillo	1,319.32	1,576.36
Abbott, R. W., Beaumont	2,287.35	2,744.82
Amicable Life Insurance Co., Waco	304.00	425.60
Ashe Syndicate, Ft. Worth	512.68	741.28
American Refining Properties, Wichita Falls	2,062.27	3,217.13
Admanson, Peter, Jr., Ft. Worth		1,579.65
Ancell, Geo., Sr., Electra	2,363.87	2,954.84
Abrams, Earl, Bridgetown	547.50	874.73
All-American Oil & Gas Co., Oklahoma City	48.31	66.51
Adams, Dr. W. B., Wichita Falls	524.09	765.18
Ailes, J. W., Wichita Falls	628.50	917.61
Ascot Co., Wichita Falls	7,879.48	12,038.31
Allday Oil Corp., Wichita Falls	7,791.09	11,458.59
American Refining Properties, Wichita Falls (M. J. Bashara Estate)	3,465.07	5,232.09
American Refining Properties, (N. B. Chenault Estate), Wichita Falls	1,767.57	2,659.14
Apple-Brandeberry Oil Co., Wichita Falls	10,229.06	15,604.95
Arco Oil Co., Wichita Falls	21,958.95	19,235.65
Antilley, J. H., Beaumont	3,872.24	4,646.68
American Maracaibo Co., New York	48,927.35	46,025.41
American Maracaibo Co., New York	24,655.00	19,134.93
Aarco Oil & Gas Co., Baltimore	8,560.00	13,405.17
American Refining Properties, Wichita Falls	66,041.11	75,648.70
Arkansas Fuel Oil Co., Shreveport	6,914.00	9,721.60
American Refining Properties, (Creditors Committee, W. M. Priddy Estate), Wichita Falls	9,216.62	12,903.26
Abercrombie Co., J. S., Houston	175,025.17	216.817.79
Atlantic Oil Producing Co., Dallas	1,853,865.20	1,286,532.23
Adams, R. W., (Trustee), Amarillo	8,380.19	12,909.61
Associated Oil Co., Texas Division, Tulsa	1,917.12	2,743.46
Anchor Oil Co., Dallas	1,101.88	1,509.72
Amerada Petroleum Corp., Tulsa	294,909.09	276,939.03
Antelope Creek Oil & Gas Co., Amarillo	10,942.67	10,504.96
Andrews Petroleum Corp., New York	4,726.95	5,150.04
Allun, Wm. E., (Atlantic Keystone Petroleum Corp. Bolivian), Ft. Worth	1,525.19	1,525.19
Atkinson & Sanders Oil Corp., Breckenridge	19,102.09	28,258.92
Amarillo Oil Co., Amarillo	2,154.68	1,766.83

Name, Address—	Barrels	Value
Ailes, O. F., Wichita Falls	31,457.31	65,321.62
Barkley & Crotty, Ranger	4,829.64	7,061.65
Barkley, Gholson, et al, Ranger	203.93	348,72
Baker, Fred R., & Mollie B., Breckenridge	1,854.00	2,795.01
Big Indian Oil & Development Co., Gainesville	784.15	1,097.81
Burke-Greis Oil Co., Tulsa	2,845.34	4,492.47
Broderick, A. J., & Calvert, Geo., Ft. Worth	555.09	933.78
Baird Oil Co., Putman	250.12	340.16
Borealis Oil Co., Oklahoma City	4,588.39	7,025.94
Beams, Drew, Okmulgee	1,121.25	1,643.23
Brown-Pope Oil Co., Austin	2,732.07	3,852.22
Breeding & Hutson, Rising Star	1,641.92	2,783.71
Barkley & Conway, Ranger	3,364.79	5,952.89
Brownwood Prod. & Ref. Co., Brownwood	1,491.75	2,036.67
Barbara Oil Co., Oklahoma City	4,382.41	7,163.99
Burris, Joe D., et al, Cross Plains	3,860.00	5,404.00
Biel, Wm. A., Van Ormy	48.00	48.80
Blue Bonnet Petroleum Corp., San Antonio	1,031.70	1,162.96
Burns, L. T., Wichita Falls	54,223.59	86,123.86
Birdwell & Neydrick Trustee, Wichita Falls	2,775.64	4,455.36
Blair & Kell, Dallas	1,562.89	1,875.84
Briggs, R. T., Corsicana	96.70	124.35
Bryant, M. D., (9-30-28), San Angelo	1,951.00	1,170.94
Bluebonnett Oil Co., (9-30-28), Wichita Falls	817.85	1,206.27
Byrd & Golston, (9-30-28), Brownwood	6,350.34	9,991.74
Bleakley and Kennison, (9-30-28), Wichita Falls	973.67	1 307.88
Bennett, Mills Production Co., (6-30-28) Houston	34,497.66	40,704.31
Bennett, Mills Production Co., (12-31-27) Houston	3,061.99	6,589.60
Bashara, M. J. & Sons, Wichita Falls	7,338.53	8,747.01
Bashara & Co., Wichita Falls	3,067.95	3,528.15
Beaver Oil Corpr., Oklahoma City	9,500.00	10,171.59
Black Diamond Oil Co., Amarillo	389.85	409.34
Badger Oil Co., The, Amarillo	8,989.11	11,649.21
Bell Oil & Gas Co., Tulsa	2,686.93	2,418.64
Buttram Petroleum Corp., Oklahoma City	41,924.02	69,313.29
Black-Pearson & Hudson, Corsicana	3,742.33	3,742.33
Bashara, J. F., Houston	6,470.79	7,764.79
Bashara & Bashara, Waco	423.00	459.15
Bowman Oil Co., Rockdale	973.75	1,371.58
Bynum, W. W., Deceased, Estate, Rockdale	1,182.01	1,666.63
Bynum & Palmer, Rockdale	238.21	343.89
Bartlett Production Co., Rockdale	1,328.99	1,862.73
Brown, Dr. E. W., Estate, Orange	1,006.59	1,207.89
Burton McKee Oil Corp., Strawn	316.57	440.03
Britton Gordon & Wickens, Strawn	545.20	850.51
Brazos River Gas Co., Wichita Falls	500.05	866.84
Big Lake Oil Co., Pittsburgh	1,534,944.00	1,543,944.00
Brown, Mrs. Carrie, et al, Orange	22,554.47	26,825.47

Name, Address—	Barrels	Value
Benedum-Trees Oil Co., Pittsburgh	16,592.03	12,922.21
Big State Oil Corp., Dallas	123.49	155.61
Black, W. A., Albany	926.96	1,091.65
Baker, J. A., & Mollie B., Breckenridge	7,596.00	10,710.36
Barkley Crotty Six and Little, Ranger	1,045.18	1,369.17
Brooks & Hanlon, Inc., Tulsa	796.12	1,035.74
Biggs Oil & Gas Co., McKinney	957.00	1,547.66
Bartlett, Wm., Electra	374.54	603.00
Black Cat Oil Co., Electra	1,024.62	1,427.01
Brinkley Producing & Refining Co., Pittsburgh	561.01	724.63
Bourbon Royalty Co., (and Lackey, W. G.), Dallas	5,730.52	4,392.42
Bluebonnett Oil Co., Wichita Falls	857.70	1,295.11
Bailey, Carl B., Wichita Falls	7,136.39	11,035.04
Baldwin, F. C., et al, Ft. Worth	2,062.93	3,286.67
Bonner, J. H. S., et al, Wichita Falls	5,297.96	7,825.48
Bonchil Co., The, Wichita Falls	5,699.44	8,973.32
Babcock, Scheurer & Schlaffke, Electra	11.97	18.07
Burkburnett Production Oil Trust, Baltimore	693.68	1,046.51
Birk, C. E., and Kelley, C. L., Iowa Park	160.76	226.65
Barnes, J. B., Electra	3,674.23	4,806.47
Baker, James Blair, Jr., (C. F. Camp, Trustees) Wichita Falls	7,973.36	11,193.78
Blair, James Blair, Jr., (C. F. Camp, Trustee) Wichita Falls	53,443.71	73,619.29
Baath Oil Co., Olney	99.00	144.54
Bass & Dillard, Wichita Falls	20,786.19	29,079.67
Boller, C. W., Wichita Falls	7,612.11	11,859.97
Bullington, Lee, Pendleton & Bullington, Wichita Falls	16,095.61	24,429.46
British American Oil Producing Co., Wichita Falls	8,699.32	13,333.00
Bailey, Fannie, Wichita Falls	1,222.40	1,879.96
Beggs, Geo., Strip, Ft. Worth	2,734.96	4,853.35
Birdwell Oil Co., Wichita Falls	23,401.66	29,332.00
Barnsdall Oil Co., Tulsa	41,248.35	54,001.71
Bexata Oil Co., San Antonio	1,538.62	1,784.02
Birdwell & Mayfield, Wichita Falls	8,013.50	13,072.77
Brannon & Murray, Cisco	3,726.45	5,599.24
Bradstreet Co., The L. G., Ft. Worth	20,973.34	34,426.49
Braden Co., The, Eastland	2,516.20	4,032.62
Bevering, A. H., et al, Henrietta	1,786.41	2,432.62
Brady Brothers, Minerva	1,496.26	2,143.20
Bowers Oil Co., (A Trust Ass.), Vernon	22,764.49	42,897.60
Bohner, C. J., Burkburnett	5,826.20	8,363.33
Barkley & Meadows, Ft. Worth	20,813.35	10,285.81
Barkley & Meadows, (9-30-28), Ft. Worth	16,267.69	8,028.79
Bruce, H. J., Wichita Falls	2,614.92	4,079.27
Breckenridge Gasoline Co., Toledo	83.55	107.47
Castlebury, S. A. Vernon	411.77	560.01
Conner Son & Cloughley, Gotebo	15,426.77	24,357.68
Curry, E. W., Rising Star	1,151.63	1,828.74
Cal Tex Oil Co., Spokane	408.66	416.83
Crown Oil & Refining Co., Houston	15,117,21	18,110.65
Cunningham Production Co., Houston	8,638.62	9,099.52
Central Texas Refining Co., Brownwood	6,623.33	10,497.67
Crown Oil Corporation, Brownwood	1,787.77	2,308.08
Coppock & Coleman, Iowa Park	20,503.00	31,473.49
Champlin Refining Co., Enid	36,688.84	28,015.70
Clark, C. W., Wichita Falls	75.56	106.54
Chapman, E. L., Trustee, Ft. Worth	1,497.08	2,331.70
Crown Central Petroleum Corporation, Houston	52,049.36	52,049.36
Cranfill & Reynolds, Cisco	409,273.26	320,866.30
Cornhusker Oil Co., Lincoln	2,152.01	2,152.01
Columbia Petroleum Co., Mirando City	9,662.00	9,662.00
Consolidated Oil Co., of Texas, Wichita Falls	81,752.27	113,294.96
Cole Petroleum Co., Laredo	46,371.05	46,371.05
Chapman, R. R., Estate, Waxahachie	14,998.29	20,603.29
Cockrell McIlroy Oil Co., Inc., Amarillo	27,585.01	28,627.12
California Co., The, Colorado	1,178,719.65	819,719.65
Cosden & Co., Ft. Worth	489,396.24	419,090.46
Cosden, J. S., Inc., Ft. Worth	6,663.42	9,295.47
Carter, Roy I., Wichita Falls	17,450.81	10,714.95
Christie Bros., Wichita Falls	8,715.54	12,929.36
Carter Oil Co., Brownwood	42,008.76	70,440.45
Conway Bros., Ranger	2,218.01	3,655.82
Collins, J. L. & Co., Corsicana	4,469.03	4,791.33
Cole, W. C., Wichita Falls	2,071.50	3,138.97
Craig & Lowrie, Pittsburgh	1,877.02	2,054.82
Crabb & McNeel, San Angelo	1,374.93	2,047.55
Chenault, W. L., Amarillo	741.36	1,135.11
Curtis, Jas. A., Wichita Falls	2,224.08	3,405.33
Camp Oil & Gas Co., The, Wichita Falls	964.93	1,437.81
Cunningham, Bratcher & Pennell, (Bonne Lease), Loving	2,845.16	3,759.17
Coffey & Schlaffke, Electra	84.60	131.97
Clark, R. R., Wichita Falls	14,765.48	23,010.27
Cable, J. H., Wichita Falls	1,775.76	2,651.23
Campbell & Wills, Burkburnett	1,694.06	2,484.95
Coffey & Graham, Wichita Falls	327.52	520.28
Chapman, O. H. Waxahachie	259.56	327.04
Caldwell, John W., Wichita Falls	1,368.90	2,067.03
Clara Oil Co., Wichita Falls	426.38	638.15
Chapman, P. A., Jr., Eastland	654.48	931.63
Conway Bros. &Gholson, Ranger	319.68	460.57
Carlin & Tobin, Ranger	429.00	707.85
Clarkson, William, Jr., Corsicana	2,657.72	3,896.98
Currie Oil Corporation	557.20	575.14
Coffield & Hale, Rockdale	2,721.02	3,727.80
Central Oil Co., Cameron	2,037.73	4,014.29
Crenshaw, Albert, Wichita Falls	4,638.80	6,547.89
Cranfill Bros. Oil Co., Dallas	192,717.21	72,302.95
Crosscut Corporation, The, Ft. Worth	1,609,42	1,907.28
Clear Lake Oil Co., Rockdale	1,390.34	1,960.34
Caudle, Fifer, Rockdale	340.00	510.00
Clem Oil Co., Houston	464.24	464.24
Coyle-Concord Oil Co., San Antonio	83,525.68	55,385.50
Capitol Oil Co., Orange	1,199.63	1,343.56
Clay, J. D., Houston	1,745.85	2,034.49
Camel Oil Co., Pampa	2,691.18	3,681.13
Chestnut & Smith Corporation, Tulsa	9,727.15	14,822.45
Carlin, W. W., Ranger	623.00	878.43
Cox, Edwin B., Ardmore	2,329.44	3,094.41
Cromwell, Carl G., Best	9,956.96	6,542.36
Cushing Refining & Gasoline Co., Cushing	11,407.82	7,407.82
Church, Weekley & Fields, Ft. Worth	41,970.67	27,280.93
Carey, E. S., et al, (E. S. Carey & Miller Drilling), Wichita Falls	774.82	1,030.51
Carey, E. S., et al, (E. S. Carey, W. J. Morgareidge, W. B. Hamilton and N. H. Martin), Wichita Falls	74.98	86.98
Cunningham, E. J., et al, Coleman	26,514.12	29,656.64
Canary, S. C., et al, Tulsa	397.98	601.32
Culbertson Bros. Co., Ft. Worth	950.15	1,545.68
Cisco Oil Co., Tulsa	31,091.28	40,290.79
Canyon Oil & Gas Co., The, Cross Plain	1,800.72	2,894.79
Cosa Oil Co., Cisco	347.96	570.32
Cashdollar & Snyder, Brownwood	257.76	317.04
Caruthers Co., San Antonio	1,892.25	2,056.70
Cranfill Bros. Oil Co., Wichita Falls	3,152.59	4,913.55
Camel Oil Co., (9-30-28), Pampa	2,638.95	3.090.57
Usher, Carson, (9-30-28), Laredo	637.73	656.86
Caldwell, John W., (9-30-28), Wichita Falls	1,611.60	2,399.21
Culbertson Co., (9-30-28), Wichita Falls	12,064.13	18,772.65
Crude Production Corporation, (9-30-28), Wichita Falls	3,465.80	4,638.21
Crude Production Corporation, (6-30-28), Wichita Falls	3,343.90	4,293.97
Crude Production Corporation, (12-30-27), Wichita Falls	1,889.28	2,450.78
Crude Production Corporation, (3-30-28), Wichita Falls	2,317.31	3,001.57
Crude Production Corporation, (9-30-27), Wichita Falls	2,491.71	3,213.82
Crude Production Corporation, (6-30-27), Wichita Falls	945.71	1,213.90
Usher Carson, Laredo	2,303.64	2,464.89
C. W. M. & F. Co., Wichita Falls	1,652.02	2,446.12
Continental Supply Co., St. Louis	571.19	728.98
Cooper & Mishler, Wichita Falls	3,491.59	4,453.76
Continental Oil Co., Wichita Falls	571,402.93	711,865.80
Culberson Co., Wichita Falls	10,874.02	17,482.98
Cowling & Hoppes, Burkburnett	444.60	634.30
Cowling & Newell Oil Co., Burburnett	300.00	439.00
Derby Oil Co., Wichita	32,924.77	41,771.11
Dull-Earles Texas Co., Albany	7,219.34	10,806.00
Dennis, J. S., Moran	1,625.01	2,239.26
Dalton, Jack Oil Co., Ft. Worth	1,815.00	2,744.31
Dixie Drilling Co., Ft. Worth	217.78	309.89
Dalton Bell Oil Co., Mineral Wells	530.00	773.80
Diana Oil Co., Tulsa	506.88	714.70
Dayton Oil Co., Dayton	277.71	333.25
Double Five Oil Co., The, Amarillo	1,710.16	1,705.63
Dunigan Brothers, Breckenridge	966.70	926.50
Derby, A. L. & Haines, E. A., Wichita	10,537.96	11,411.33
Douglas Oil Co., Tulsa	1,960.61	1,980.22
Deering, John A., Houston	5,261.37	6,747.07
Deutser, B., Trustee, Beaumont	1,516.83	1,820.20
Dunlop, Robert, Ponca City	9,782.98	14,870.12
Duquesne Oil Corporation, Eastland	481.40	770.91
Dunigan Brothers, Breckenridge	994.60	1,343.28
Dallas Petroleum Co., Dallas	440.10	714.76
Developers Oil & Gas Co., Wichita Falls	956.00	1,452.41
Delmar Oil Co., Bartlesville, Okla.	2,343.02	2,810.03
Dillon-Glasscock Co., San Antonio	554.40	569.76
Davis, Caroline A., Somerset	397.99	433.82
Davis, W. F., Wichita Falls	471.49	726.53
Dalton Bell Oil Co., (9-30-28), Mineral Wells	578.00	843.88
Deering, John A., (9-30-28), Houston	9,143.50	11,795.12
Dunlop, Robert, (9-30-28)	924.21	1,367.83
Dull-Earls Texas Co., (9-30-28), Albany	416.70	560.00
Dunigan & Wylie, Albany	88.99	118.00
Dale-Knotts Oil Co., Wichita Falls	301.56	480.99
Dudley, G. S., Iowa Park	1,271.42	2,046.99
Dunaway, J. E., et al, Wichita Falls	2,177.94	3,391.22
Duncan, J. W., Wichita Falls	1,412.00	2,061.52
Dixon Reeder & Cook, Wichita Falls	880.82	1,336.54
Dale & Crawford, Electra	726.16	1,130.48
Dominion Oil Co., Tulsa, Okla.	1,344.53	1,886.52
Douglas Bros. Oil Co., Electra	2,926.59	4,637.36
Douglas Production Co., Electra	2,062.05	2,921.35
Duke-Langford Oil Co., Wichita Falls	11,557.78	11,557.78
Derby, Haines & Williams, Wichita, Kans.	6,264.70	5,188.56
Davis, Beatrice H., Admnx., Tulsa	65.99	86.34
Dixie Oil Co., Inc., Shreveport	105,742.13	68,879.60
Dean Oil Co., Burkburnett	453.89	549.20
Dixon Creek Oil Co., Inc., Amarillo	106,976.16	100,886.09
Dorian, R. P., Wichita Falls	11,460.88	16,120.00

Name, Address—	Barrels	Value
Danciger Oil & Ref. Co., of Texas, Ft. Worth..	78,833.26	105,329.25
Devonian Oil Co., Tulsa	29,095.11	33,279.62
Duffield & Howard Oil Co., Tulsa	968.01	1,169.51
Dale Oil Corp.,Wichita Falls	25,554.98	41,199.02
Ellison Oil Co., Rockdale	66.44	90.52
Erie Investments Ltd., of Texas, Toronto, Can.	545.00	713.95
Easton, E. S., Wichita Falls	1,652.89	2,522.26
Engel, E. A., Albany	477.98	679.16
Ewmo Oil Corp., Abilene	314.10	419.31
Electra Pro. Co., Inc., Electra	1,107.02	1,673.12
Ernest Oil Co., Rockdale	457.71	646.08
Eastland Oil Co., Ft. Worth	38,588.85	41,903.92
Electra Gulf Oil Co., Electra	690.85	917.64
Eggers, J. E., Jr., San Antonio	636.28	689.20
East Batson Oil Co., Batson	21,319.37	25,583.24
Eureka Pro. Co., Tulsa	16,938.19	25,592.31
Empire Gas & Fuel Co., (Me), Bartlesville	251,288.87	294,410.04
Eddy Oil Co., Beaumont	1,657.18	1,988.62
Engel, E. A., (9-30-28), Albany	640.57	850.94
Erickson, Selma E., Wichita Falls	112.95	170.56
Emrick (Lease), (J. C. Wallace), Minerva	332.64	468.96
Ferguson & Watson, Electra	1,209.76	1,902.81
Flynn, W. B., Beaumont	4,111.74	5,051.84
F. H. E. Oil Co., Sherman	332,996.22	228,613.73
Fresno Oil Co., Wichita Falls	30,108.31	44,560.29
Fisher, J. A., Wichita Falls	1,385.72	2,180.57
Four Oil Co., Wichita Falls	1,972.92	2,870.51
Finston, Mark, et al, Tulsa	553.81	771.06
Ferguson, W. R., Wichita Falls	523.53	799.93
Falls Production Co., Wichita Falls	7,121.65	10,718.41
Fleming & Kimbell, Sherman	5,048.57	4,137.61
Farlyn Oil Co., Houston	16,019.98	9,680.26
Fuchs, Fritz, Taylor	156.00	203.65
Fogle Oil Co., Minerva	1,613.00	2,188.00
Farish & Ireland Lease, Houston	7,037.00	8,444.40
Fountain Production Co., Saratoga	2,197.69	2,635.23
Fort Bend Oil Co., Houston	4,551.54	5,308.69
Fort Ring Oil & Gas Co., Ft. Worth	980.33	1,879.71
Fox & Adams, Burkett	14,720.07	17,937.77
Frontier Oil Co., San Antonio	10,583.57	13,411.06
Freeman-Hampton Oil Corp., ("B" Lease), Wichita Falls	1,025.54	1,651.14
Freeman-Hampton Oil Corp., ("A" Lease), Wichita Falls	4,976.20	7,759.74
Franklin, Wirt, Ardmore	1,360.08	2,122.08
Fain-McGaha Oil Corp., Wichita Falls	641,715.91	917,290.62
Frio Oil Co., San Antonio	229.20	173.05
Gilliam, Logan Oil Co., Ft. Worth	2,760.39	2,546.65
Gulf Production Co., Houston	6,300,385.94	5,638,103.11
Grayburg Oil Corp., San Antonio	171,952.02	168,695.21
Green Production Co., Ft. Worth	18,873.53	15,131.50
Gwynn, P. F., Wichita Falls	14,323.52	22,999.43
Graham & Lesh, Cisco	265.23	371.00
Gilliland, C. W., Wichita Falls	2,042.02	3,191.66
Golden West Oil Co., San Antonio	44,835.95	54,225.51
Gates Oil Co., (Wyoming Corp.), Denver	7,787.92	7,670.47
G. & K. Production Co., San Antonio	1,413.44	1,644.47
Group No. 1 Oil Corp., Big Lake	405,516.76	501,005.38
Godley Oil & Gas, Dallas	36,869.19	34,089.93
Gultex Production Co., Waxahachie	2,638.08	4,247.09
Grinshaw Lease (F. A. Mann), Graham	564.00	902.40
Gordon Oil Co., of Texas, Logan, Ohio	82.28	120.12
Granite Oil & Gas Co., Ridgeway, Colo.	777.64	1,228.39
Grady, D., Electra	387.12	630.38
Grand Duke Producing Co., Muskogee	325.62	244.51
Grayce Oil Co., Wichita Falls	29,240.96	44,702.66
Guarantee Oil Co., Electra	136.74	213.00
Glenridge Oil Corp., St. Louis, Mo.	3,804.87	5,514.10
Galvez Oil Corp., Tulsa, Okla.	4,949.16	7,140.16
Gardner Bros. & Collins, Wichita Falls	1,236.28	1,876.10
Gaither Production Co., Rockdale	1,090.87	1,549.40
Glass Bros., Rosebud	733.95	998.16
Goldeline Oil Corp., Oklahoma City, Okla	9,500.72	10,171.59
Gopher Oil Co., Amarillo	1,285.65	1,162,32
Gwynn, P. F., Agent, Wichita Falls	1,657.26	2,588.25
Gwynn-Boyd Drilling Co., Wichita Falls	2,828.13	2,947.62
Gladys Oil Co., Saratoga	3,138.36	3,138.36
Gilbert Co., Beaumont	7,746,87	9,296.24
Gardner, Collins & Dunnigan, Pampa	2,178.59	2,808.47
Gandy, L. O., Wortham	2,933.89	4,577.04
Gordon, Jr. and Sharp, Houston	5,072.84	6,036.69
Gordon, Jr. H. B., Tr., Houston	14,210.90	16,937.47
Gordon, Jr. & Sharp, Houston	19,052.74	22,647.19
Gholson, Jno. M., Ranger	10,620.51	16,335.56
Gallagher & Lawson, Desdemona	252.30	322.15
Gates Oil Co., Ardmore, Okla.	3,123.59	5,114.25
Gilbert, J. E., Carbon	535.00	535.00
Gainesville Oil & Dev. Co., Gainesville	1,179.48	1,179.48
Godfrey, F. L., Enid, Okla.	77.63	113.63
Gwinnup, H. G., Ft. Worth	908.93	1,579.53
Gohlke, F. H., Wichita Falls	33.50	36.64
Gilman & McMurry, Cisco	7,980.39	13,495.17
Gunn Pro. Co., Cross Plains	1,597.00	2,194.41
Gilman & Conway Bros., Ranger	5,423.11	9,144.41
Glasscock Leasing Syn., San Antonio	1,804.73	2,110.43
Ginter Lange Oil Co., San Antonio	1,636.70	2,058.57
Ginter Jones Oil Co., San Antonio	609.97	737.85
Gates-Bacon-Lea, Wichita Falls	7,503.42	10,597.54
Gilliland, C. W. & Associates, Wichita Falls..	27,858.94	43,689.77
Grebin Syndicate, (Alexander Lease), Wichita Falls	975.24	1,309.61
Gardner, Wilson & McCaldin, Wichita Falls	1,868.88	2,915.43
Gulf Coast Oil Corp., Dallas	4,164.14	4,996.97
Gohlke, F. H., (Apr. 1 to Sept. 30, 1928) Wichita Falls	74.00	86.45
Guthrie Coal & Ferguson, Wichita Falls	706.99	999.98
Golding & Cochran, Wichita Falls	11,441.02	16,131.83
Golding, Dudley S., Wichita Falls	17,181.76	22,851.74
Harris-Fisher Oil Co., (9-30-28), Cisco	694.70	998.78
Harris-Fisher Oil Co., Cisco	769.82	1,126.12
Howell, M. L., Lohn	546.66	717.43
Holloway, R. R., Receiver, Brownwood	882.65	1,306.32
Hickok Producing & Dev. Co., Toledo, Ohio	788.46	1,100.27
Hammond, Jake L., Ardmore, Okla.	10,331.66	14,696.72
Hallmack Oil Co., Dallas	1,351.45	1,933.68
H. B. J. Oil & Gas Trust, Baltimore, Md.	2,359.62	3,847.81
Houston Oil Co. of Texas, et al, Houston	93,409.77	96,937.97
Humphreys Corp., Houston	49,711.22	61,493.58
Hyer, Fred, Ft. Worth	4,841.45	4,324.55
Hamilton, Walter R., Tr., San Antonio	4,440.27	6,124.84
Hamilton & Martin, Wichita Falls	2,782.36	4,090.07
H-Y Oil Co., Inc., Ft. Worth	13,782.66	19,874.05
Hughes, William K., Tr., St. Louis, Mo.	960.71	1,333.66
Hinson & Tidwell, Graham	4,403.49	6,256.71
Howard Petroleum Corp., Tulso, Okla.	768.01	935.06
Howard, Duffield & Berlin, Tulsa, Okla.	1,336.73	1,425.99
Hamilton, W. L., Bridgetown	405.84	657.95
Hammon & Heyser, Wichita Falls	18,890.93	30,677.27
Hammon & Garrett, Wichita Falls	40,436.45	65,648.43
Hammon, Heyser & Garrett, Wichita Falls	25,248.22	38,275.05
Hammon, W. H., Wichita Falls	18,007.50	29,892.75
Hobbs, Henry, Wichita Falls	4,989.83	7,654.49
Hill, W. R., Tr., Burkburnett	221.33	356.34
Hobbs Oil Co., Tulsa, Okla.	2,501.45	3,673.76
Hemby, J. M., Electra	745.45	1,154.66
Houghland Pro. Co., Dallas	5,366.33	6,777.77
Hyde, George, Houston	6,047.79	7,079.08
Hanlon Gasoline Co., Tulsa, Okla.	1,481.31	1,883.31
Home Oil & Gas Co., Inc., Albany	2,316.36	3,123.18
Home Oil & Gas Co., Ft. Worth	12,817.99	18,225.91
Handrick, August, Moran	166.00	192.56
Holder, F. W., Breckenridge	668.75	811.47
Hopkins, S. A., Cisco	451.39	591.32
Homaokla Oil Co., Oklahoma City, Okla.	5,171.98	7,512.36
Hickey, T. J., et al, Corsicana	59.84	85.99
Hefley, McIntosh & Thomas, Cameron	658.00	894.96
Hughes, J. K. Oil Co., Mexia	27,352.00	37,010.93
Houston Production Co., Houston	13,498.32	16,426.01
Harrison Oil Co., Houston	53,810.09	76,803.04
Houston Gulf Gas Co., Houston	10,883.18	10,883.18
Hagy Co., (Year 1928), Amarillo	557.00	462.12
Horn, T. W., Houston	1,720.06	2,064.06
Harvey, R. A., Houston	1,192.00	1,384.32
Hardy, J. M. & Co., Sourlake	748.85	898.62
Hill & Dowell, Batson	12,459.44	14,951.32
Hankamer, Earl C., Sourlake	457.14	548.57
Herrmann, et al, Pampa	153,962.89	210,424.03
Houseman, D. H. & Co., Dallas	26.56	38.52
Hamilton, Robert, et al, Eastland	240.00	336.00
Hedrick-Camp Drilling Co., Wichita Falls	3,949.66	4,609.59
Huber, J. M. Co. of La., Inc., Breckenridge	232.61	362.87
Hyde Pro. Co., Houston	4,305.07	5,166.05
Hitchman & Howard, Inc., San Antonio	2,630.67	3,257.02
Helvetia Oil Co., San Antonio	13,830.89	15,373.38
Hammond, J. G., Ft. Worth	201.08	305.82
Hart Oil Corp., Ft. Worth	367.97	551.95
Hueco-Ranger Oil Co., (Sept. 30, 1928), El Paso	399.67	552.89
River Bed Lease of A. L. Hawse, Ft. Worth..	57,269.08	36,754.80
Hankamer, Earl C. & Co., (Sept. 30, 1928), Sourlake	529.96	635.95
Hughes, Chas., (Sept. 30, 1928), Eastland	409.80	618.79
Hobbs, Henry, (9-1-27 to 10-1-28), Wichita Falls	21,339.89	30,846.22
Hanover Co., Inc., (Years 1927 & 1928), Wichita Falls	26,524.12	36,173.12
Hunter, T. F., (7-1-23 to 12-31-28), Wichita Falls	220,213.84	366,786.57
Hopkins, S. A., Moran	572.06	726.52
Hopkins, S. A., (Sept. 30, 1928), Moran	554.44	726.32
Humble Oil & Ref. Co., Houston	3,383,655.48	3,621,135.32
Harris & Simons, Tulsa, Okla.	6,079.90	3,647.94
Holmes & Huey, Whittenberg	2,042.73	2,063.16
Hughes, Chas., Eastland	289.71	445.77
Hardy Oil Co., Wichita Falls	3,242.03	5,365.24
Humphreys Bros. Inc., Houston	2,070.25	3,423.42
Holbrook & Woods, Wichita Falls	32,098.24	48,448.55
Hull Oil Co., Beaumont	5,824.18	6,954.42
Henshaw Oil Corp., San Angelo	50,012.23	50,772.03
Hambleton, Geo., San Antonio	479.06	571.76
Hammond, L. P., Wichita Falls	4,029.02	6,273.75
Hoffman & Page, Eastland	10,132.85	16,188.56
Herbert Oil Co. of Texas, Tr., Ft. Worth	9,347.51	13,714.18
Independent Oil & Gas Co., Tulsa, Okla.	520,004.34	350,137.33
Interocean Oil Co., Tulsa, Okla.	6,978.75	11,562.80
Infield Petroleum Co., Austin	871.95	1,121.32

Name, Address—	Barrels	Value
Idaho Oil Co., San Antonio	1,481.69	1,755.14
Irick Oil Co., Waskom	167.28	235.86
Ilseng Production Co., Ft. Worth	641.91	928.35
Jones, Hugh, Burkburnett	2,126.88	2,887.31
Jacob Oil & Gas Co., Graham	362.02	537.74
Justin Oil Corp., et al, Wichita Falls	11,904.17	18,891.52
Japhet Production Co., Houston	6,100.56	5,683.34
Jones, J. E., Wichita Falls	1,456.97	2,213.49
Jones, W. A., Minerva	861.06	1,124.06
Janellen Oil Co., (Inc. P. G. Walker), Tulsa, Okla.	314.50	377.40
Jones, Edwin M., El Dorado, Ark.	17,394.12	24,307.25
Jones, J. A., Moran	400.36	636.40
Judson Oil Co., Tulsa, Okla.	8,248.04	12,812.64
Jackson, T. H., Sipe Springs	118.55	155.11
James, Tom, Albany	10,150.66	15,327.47
Jonray Oil Co., San Antonio	1,383.27	1,450.27
Jacobs, I., (9-30-28), Dallas	71.21	89.73
Jackson Co., The, San Antonio	1,301.95	1,534.53
Jackson, J. S., Trustee, Sourlake	4,473.30	5,367.96
Johnson Bros., San Antonio	7,503.90	9,458.59
Junior Oil Co., Houston	1,746.61	3,053.04
Jones, R. C. & Co., Inc., Cushing, Okla.	122.20	64.69
Julia Oil Co., Sourlake	3,935.70	4,722.85
King Royalty Co., Wichita Falls	55,503.73	84,373.58
Keener Oil & Gas Co. of Texas, Tulsa, Okla.	4,875.28	6,971.79
Killam, O. W., Laredo	87,828.57	87,828.57
Knotts, F. F., Wichita Falls	488.58	743.87
Kirk & Evans, Gorman	3,338.03	4,836.88
Kershaw, L. R., Muskogee, Okla.	1,349.81	877.44
Kirby Petroleum Co., Houston	23,695.30	17,288.66
Kingwood Oil Co., Okmulgee, Okla.	430.32	629.08
Keystone Production Co., Ft. Worth	3,595.35	5,623.12
Keck Investment Co., Los Angeles, Cal.	3,037.00	1,822.20
King & Daniel, Wichita Falls	7,458.01	11,811.73
Koenig, Max W., San Antonio	21,596.56	21,596.56
Kate Bell Oil Co., The, Dallas	1,125.64	1,731.76
Kaufman, L., San Antonio	417.42	431.46
Kokoma Petroleum Co., Gorman	554.00	817.71
Kewanee Oil & Gas Co., The, Titusville, Pa.	104,430.69	148,512.23
King, Anna B., Muskogee, Okla.	449.97	292.52
Kuhlemeier & Kleiner Oil Co., Cisco	961.53	1,448.26
Kone Production Co., San Antonio	56,178.47	94,272.30
Kavanaugh Petroleum Co., Houston	2,848.38	4,016.20
Keller, J. E., Iowa Park	666.38	1,064.51
Keen & Wolf Oil Co., Shreveport, La.	19,103.36	22,924.06
Kent-Middleton Refining Co., Corsicana	13,027.76	18,155.23
Kent, G. C., Corsicana	23,988.13	34,499.07
Kleinfelder, B. F., Breckenridge	523.00	754.67
Kahle Gracey & Diver, Bridgeport, Ill.	5,145.81	3,087.48
Kurz Oil Co., Somerset	503.31	486.16
Kimmell & Woofter, Wichita Falls	889.57	1,420.35
Kerr, T. P., Corsicana	518.11	742.63
Kimmell-Bostic, Burkburnett	1,648.94	2,423.94
Keller, J. E., (9-30-28), Iowa Park	1,440.88	2,227.51
Kimmell & Bostic, (9-30-28), Burkburnett	2,107.69	3,077.23
Klemcke, Geo., Trustee, Von Ormy	1,835.06	1,891.66
Kishi, K., Terry	537.73	645.28
Kistler, Frank E. and Co., Denver, Colo.	5,541.55	4,946.65
Kemrow Co., Wooster, O.	15,326.54	23,832.36
Kolp, C. F., Electra	9,748.38	14,218.50
Kemp, Randel & Wilson, Electra	45.48	64.12
Kay, A. W., Receiver, (Jones, et al), (9-30-28), Graham	1,696.01	2,499.28
Kay, A. W., Receiver, (Jones, et al), Graham	1,418.39	2,085.44
Kleiner, Chas. H., Cisco	18,820.91	26,999.18
Kingery, F. A., Trustee, Amarillo	9,836.31	8,637.37
Lackey, J. L., Receiver, Stinnett	20,823.71	16,184.77
Lubell, Samuel L., et al, Tulsa, Okla.	16,577.48	15,441.08
Lewis Production Co., Pittsburgh, Pa.	5,115.12	7,416.92
Lowry Oil Corp., Wichita Falls	6,425.91	9,839.43
Lowry Oil Corp., (3-31-28), Wichita Falls	2,676.56	3,738.33
Lawson, Eugene B., Tulsa, Okla.	72,062.80	102,921.53
Lomax, Thornton, Jr., Wichita Falls	3,029.52	4,837.53
Langford, W. S., Wichita Falls	1,050.69	1,518.80
Lain Oil Co., San Antonio	1,352.62	1,504.12
Lee & Simon, Cisco	201.44	287.94
Lynch, John D., Trustee, (6-30-28), Sioux Falls, S. D.	2,238.86	3,335.88
Lynch, John D., Trustee, (9-30-28), Sioux Falls, S. D.	2,166.31	3,534.64
Laredo Oil Co., Laredo	1,446.81	1,446.81
Lee Homer, Wichita Falls	1,512.99	2,399.45
Lockhart & Co., Los Angeles, Cal.	33,691.73	38,408.42
Lytle, C. F., Mexia	9,865.96	13,417.63
Lytle Oil Association, Lytle	256.05	245.70
Lynch, John D., Trustee, Sioux Falls, S. D.	2,223.96	3,802.95
Little, Wm., Breckenridge	313.02	422.30
Leonard Oil Co., Somerset	218.63	247.76
Leonard, Geo., Somerset	546.64	603.71
Lowe, Delaney & Carter, DeLeon	653.13	972.91
Lamb, Geo. E. & Euperior Oil & Prod. Co., Brownwood	147.43	200.49
Letwin, Sam, (Akers Lease), Breckenridge	1,157.52	1,658.64
Letwin, Sam, (Curry Lease), Breckenridge	1,248.53	1,786.57
Lefors Petroleum Co., Lefors	120,432.28	153,667.51
Lackey, W. G., Tulsa, Okla.	3,003.64	4,423.97
Little Caddo Syndicate, Ft. Worth	834.96	1,255.84
Little Flower Oil Co., St. Louis, Mo.	779.40	982.75
Lesh Kilcrease & Co., Necona	2,577.81	2,320.03
Lesh & McCall, Nocona	27,356.01	16,413.61
Lucey Petroleum Co., Dallas	460.70	640.41
Levy, Leonard M., Trustee No. 2, Ft. Worth	1,448.47	2,332.04
Levy, Leonard M., Trustee No. 1, Ft. Worth	3,362.75	5,619.16
Lowenstein Oil Co., Rockdale	1,214.77	1,712.87
Leiser-Rochmill Prod. Co., Ft. Worth	1,564.95	2,368.09
Louisiana Oil & Refg. Corp., Shreveport, La.	52,613.22	45,156.73
Liberty Oil & Gas Trust, Baltimore, Md.	394.82	517.20
Landreth Production Co., Ft. Worth	5,495.54	7,058.04
Lesh, Jno. I. & Co., Wichita Falls	10,742.06	6,895.47
Larkin, W. B., Trustee, Wichita Falls	300.54	457.19
Linedo Oil Co., Lincoln, Neb.	1,823.04	1,823.04
Loggie & Arendt Oil Co., Albany	2,727.00	3,436.02
Lake View Oil Co., Sourlake	13,735.90	16,483.08
Little, Wm., (9-30-28), Breckenridge	327.90	431.92
Lone Star Gas Co., Dallas	9,032.30	13,957.97
Lake Erie Trust Co., Trustee, Cleveland, O.	885.05	1,424.93
Lebow, C. H., Tulsa, Okla.	1,240.32	1,996.89
Lake Graham Oil Co., Houston	3,117.72	3,864.29
Lewis, J. E., et al, Eastland	665.96	965.80
Lewis, J. E. & Co., Eastland	2,832.57	4,177.91
Midwest Exploration, Amarillo	112,890.01	139,385.01
Minnehoma Oil & Gas Co., Tulsa, Okla.	7,060.14	6,318.95
McIlroy Oil Co., Inc., Amarillo	58,311.81	52,202.61
Martin & Hamilton, (9-30-28), Wichita Falls	88,497.42	119,825.50
Morton, A. D., Tulsa, Okla.	613.12	833.85
Martin & Hamilton, Wichita Falls	29,928.93	41,092.42
McKanna, James E., Agt., Wichita Falls	46,559.74	66,701.60
Maxson & Co., (1-1-28 to 9-30-28), Wichita Falls	3,703.86	5,169.99
Maer & Staniforth, Wichita Falls	1,730.91	2,267.48
Magee Bros., Electra	960.73	1,542.40
M. & V. Oil Co., Wichita Falls	4,457.00	6,802.08
Mid-Kansas Oil & Gas Co., Findley, O.	1,611,634.73	1,086,268.72
Murko Oil & Royalty Co., Dallas	10,547.91	16,450.29
McCutcheon, C. E., Trustee, Wichita Falls	8,579.32	12,958.83
McChesney, Nancy, Olny	5,124.62	7,124.14
Moutray Oil Co., Abilene	88,017.46	132,316.88
Mook-Texas Oil Co., Ft. Worth	12,235.37	17,594.00
Mann, Floyd, (Payne Lease), Graham	1,026.00	1,479.71
Mann & Forbes, (9-30-28), Graham	2,149.27	3,219.71
Mann & Forbes, Graham	2,145.30	3,345.65
Maxwell, J. C., Ft. Worth	80,442.23	54,652.84
Madden & Hunt, Olney	32,242.24	52,749.85
McMan Oil & Gas Co., Tulsa, Okla.	408,521.11	344,494.91
McCarty Oil Co., Wichita Falls	70,243.57	113,728.83
Murchison Oil Co., Dallas	348,111.48	238,771.86
Mid-Continent Petroleum Corp., Tulsa, Okla.	13,951.35	19,725.90
Manhattan Oil Co. of Kansas, Tulsa, Okla.	14,198.00	17,632.51
Massie, J. H., Wichita Falls	19,021.06	28,429.27
Marland Production Co., Ponca City, Okla.	1,104,682.17	1,026,531.45
Magnolia Petroleum Co., Dallas	3,031,049.56	3,170,185.49
Midwest & Gulf Co. of Texas, Trust Estate, Tulsa, Okla.	1,273.34	1,455.99
Merdyan Petroleum Co., Pampa	111,844.37	160,054.70
Marnet Oil & Gas Co., Tulsa, Okla.	3,855.93	5,473.12
Mues & McDermott, Ft. Worth	379.39	531.90
McDonald, W. W., et al, Dallas	3,985.72	6,025.36
McCormick & Noack, Rockdale	147.13	200.10
Meridian Petroleum Corp., Tulsa Okla.	3,546.68	5,004.36
Mid-Continent Holding Corp., Wichita Falls	3,108.59	4,397.63
McCall C., Trustee, Nocona	793.59	714.23
Minntex Oil Corp., Wichita Falls	898.29	1,304.91
Marquette Oil Co., Tulsa, Okla.	5,791.80	6,965.43
Mills Bennett Production Co., Houston	93,102.74	110,249.20
Mecom Oil Co., Liberty	5,794.81	6,953.77
Medina Oil & Gas Ass'n., San Antonio	214.54	246.55
McDaniel Oil Corp., Cisco	5,057.03	8,314.12
McCullough, Everett, Wichita Falls	384.78	542.96
McCrary, E. W., Tulsa, Okla.	4,426.29	6,069.88
Madison Oil & Gas Co., Electra	5,611.21	9,056.32
Moss, Urchel & Keys, Dallas	11,585.53	15,756.21
Moss & Urschel, Dallas	21,247.38	29,284.20
Mennis, G. W., Wichita Falls	5,715.73	8,447.44
Merrick & Lamb, Ardmore, Okla.	25,449.18	20,359.34
Merrick & Bristow, Ardmore, Okla.	172,573.12	115,573.12
Moody Corporation, Tulsa, Okla.	252,784.04	302,405.65
Moran, W. J., Wichita Falls	2,722.08	4,381.33
McLester Oil Co., Eastland	22,808.49	38,820.07
McNamara Oil Co., Beaumont	2,534.52	3,041.42
McBride, W. C., Inc., St. Louis, Mo.	5,361.68	7,225.83
Mendenhall Oil Co., Cisco	2,262.20	3,719.20
McCoy, J. H., Tulsa, Okla.	509.42	852.46
McJunkin, Florence T., et al, Tulsa, Okla.	536.29	902.10
Moore, F. L., Trustee, Tulsa, Okla.	2,484.36	3,636.61
Mayberry, C. R. Co., Laredo	3,596.67	3,596.67
Maxwell, J. C., (6-30-28), Ft. Worth	11,608.21	6,964.93
Mills & Garrity, Corsicana	1,725.40	2,070.48
McCarter, R. C., Cisco	389.59	584.59
Montgomery, Rea & Montgomery, Sedwick	1,990.97	2,911.00
Minerva Petroleum Co., Minerva	645.06	925.72
Meredith & Gant, Wichita Falls	2,576.12	3,231.05
Maben Oil Corp., (1-1-28 to 12-31-28) Wichita Falls	868.38	1,218.63
Matador Oil & Gas Co., Quanah	20.50	28.84
May, F. N., Santa Anna	263.08	345.47

Name, Address—	Barrels	Value
Macknold Co., San Antonio	233.64	254.68
McGraw Oil Co., Tulsa, Okla.	1,547.08	2,085.10
Mitcham, G. P., Cisco	1,132.34	1,640.49
Minor Oil Co., Beaumont	8,455.42	10,146.50
McNallen & Griffin, Tulsa, Okla.	5,892.06	8,480.91
Midland Oil Co., Ft. Worth	7,247.98	11,966.41
Medio Oil Co., San Antonio	914.12	1,142.65
Mason, J. F., Ft. Worth	3,167.56	4,898.10
McMurray, J. L., et al, Cisco	2,444.41	3,908.67
Milham Corporation of Texas, San Antonio	12,991.93	20,400.92
McDonald, M. C., Putnam	4,459.23	6,602.98
Marshall, Geo. S., Laredo	11,606.51	11,606.51
McFall, J. M., (period 1927 & 1928), Wichita Falls	15,522.68	21,571.60
Menke, Jno. G., (period Mch. 1928 to 12-31-28) Wichita Falls	1,837.13	2,789.13
Meredith, J. D., Moran	4,760.09	5,664.75
McCutcheon, C. E., (Petroleum Producers Co.), Wichita Falls	1,576.29	2,459.03
New Domain Oil & Gas Co., Pittsburgh, Pa.	4,507.59	4,159.35
National Investment Co., Breckenridge	2,790.77	4,215.47
National Supply Co. of Texas, Ft. Worth	163.21	238.29
Norman Oil Co., Wichita Falls	1,122.68	1,760.15
Moore, N. A., Eastland	2,877.06	4,158.99
Nunn-Stubblefield Oil Co., Amarillo	8,882.86	10,304.11
Number Nine Oil Co., Tulsa, Okla.	2,539.68	3,883.84
Newport & Ohio Petroleum Co., Newport, N. Y.	239.48	346.41
Navarro Oil Co., Houston	149,961.68	191,015.05
National Oil Co., San Antonio	804.73	809.88
Nabob Oil & Gas Co., Amarillo	10,979.16	16,302.11
National Petroleum & Refining Co., Wichita Falls	97.44	150.63
Noble Oil & Gas Co., Tulsa, Okla	2,974.00	4,176.22
Noack Oil Co., Rockdale	1,852.16	2,586.44
Noak & Lanning-Phillips & Perry, Rockdale	154.59	210.24
Noak & Lanning-Shelton, Rockdale	396.06	542.63
Newton-Palmer Oil Co., Rockdale	537.76	754.50
Nimrod Oil Co., Dallas	213.65	343.97
Nutt & Gates, Wichita Falls	1,613.87	2,597.83
Necessity Oil Corp., Eastland	1,238.18	1,726.95
Nunn & McAuley Oil Co., Amarillo	11,948.10	13,992.69
North Fork Oil Co., Amarillo	3,676.74	4,572.05
Oil Investment Co., Wichita Falls	3,067.50	4,497.75
Overby, J. D., Iowa Park	552.44	862.79
Omohundro, W. B., Wichita Falls	21,472.79	33,272.76
Olney Oil & Refining Co., Olney	679.82	1,001.28
Owenwood Pool No. 3, (J. W. Robins, Trustee), Ft. Worth	4,171.00	5,715.50
Operators Oil & Gas Co., Breckenridge	1,009.56	1,494.81
Oil Operators Trust, (9-30-28), Ft. Worth	20,301.27	22,990.89
Old Ocean Oil Co., Kansas City, Mo.	3,710.15	3,582.90
Owen-Sloan Oil Co., Big Springs	457,325.15	303,362.13
O'Neil, H. A., (7-1-28) to 12-31-28), Burkburnett	2,283.69	3,298.21
Orange Petroleum Co., Orange	30,948.47	36,993.08
O'Neil, John, Wichita Falls	12,313.85	18,683.69
Orient Oil Operating Organization, Wichita Falls, Kans.	20,025.93	14,018.16
Ohio Somerset Oil Co., Cleveland, O.	1,524.67	1,600.90
Osage Development Co., Bartlesville, Okla.	1,272.28	1,272.28
Offenbacher, Emil, Tulsa, Okla.	122.92	172.50
Oriental Oil Co., Dallas	607.53	799.03
Owens Oil Co., Brownwood	736.81	756.38
Old Colony Oil Co., Dayton	1,601.97	1,922.36
Olean Petroleum Co., Bristow, Okla.	24,343.54	17,486.27
Optimist Oil Co., Electra	3,402.99	4,979.02
Omilak Oil Co., Spokane, Wash.	251.54	291.78
Oil Operators Trust, Ft. Worth	19,550.38	17,376.29
Oldom, Wm. P., Iowa Park	1,422.00	2,250.28
Oklaha Co., The, Tulsa, Okla.	803.84	1,214.14
Powers Production Co., Houston	1,931.14	2,017.17
Phillips, J. R., (Blasdel), Amarillo	263.84	182.05
Phillips, J. R., (Heywood), Amarillo	14,312.36	14,459.82
Proctor Oil Co., (4-1-28 to 9-30-28), Wichita Falls	6,628.35	9,856.76
Pollard, W. E. & C. E., Pampa	6,972.97	9,591.77
Phair & Wright, Houston	508.33	355.83
Primrose Oil Co., (9-30-28), Sourlake	1,400.74	1,680.87
Parsons, Ed V., (9-30-28), Ft. Worth	304.69	507.66
Patterson, W. A., (Dec. 31st, 1927), Ft. Worth	2,115.58	2,874.97
Preston Oil & Gas Co., Brownwood	351.05	442.97
Piper, L. E., Trustee, Vernon	2,001.62	2,990.13
Price-Russell & Co., Ranger,	4,351.00	7,420.64
Portland Drilling Corp., Wichita Falls	962.31	1,454.06
Parry Oil Co. of Texas, Ft. Worth	1,130.39	1,589.14
Powell, J. L., Wichita Falls	429.70	645.71
Pois, M., Trustee, Wichita Falls	288.36	435.42
Pois, M., et al, Wichita Falls	5,579.84	8,524.79
Pioneer Oil Gas & Refining Co., Danville, Ill.	1,201.75	1,295.93
Piney Oil & Gas Co., New York, N. Y.	6,280.66	5,280.35
Pinto Oil Co., (9-30-28), Mineral Wells	558.89	681.85
Pinto Oil Co., Mineral Wells	338.02	477.26
Pickens & Lewis, Dallas	574.03	867.19
Pivoto, M. E., Sourlake	3,073.59	3,688.30
Putnam Oil Co., Tulsa, Okla.	50,440.63	73,798.93
Paraffine Oil Co., The, Houston	13,695.71	16,434.86
Pratt, Thos. H., Brenham	185.50	181.32
Perkins, J. J., Wichita Falls	3,306.40	4,936.03
Petroleum Investment Co., Ft. Worth	3,606.99	5,575.81
Poole, B. O., Batson	1,297.03	1,587.22
Palmer, Freddie Oil Co., Rockdale	142.51	175.83
Poor Boy Oil Co., Rockdale	543.19	738.93
Py-Tex Oil Company, Winchester, Ky.	868.29	1,526.16
Pennok Oil Corp., Tulsa, Okla.	19,132.74	24,046.84
Prescott, Phoenix Oil & Gas Co., (A. C. Trumbo Tr.), Muskogee, Okla.	325.62	244.51
Petroleum Venture Co., Somerset	244.54	393.72
Progressive Production Co., Kansas City, Mo.	1,689.47	2,601.33
Producers & Refiners Corp. of Texas, Independence, Kan.	5,456.42	7,993.01
Prairie Lea Production Co., San Antonio	7,059.48	7,059.48
Primrose Oil Company, Sour Lake	1,280.28	1,536.32
Producers Drilling Co., Wichita Falls	9,586.66	14,512.83
Pace & Ward, Breckenridge	1,926.45	2,831.88
P-M Drilling Co., (W. E. Ross, W. L. Samuels, A. J. Fraley) Chelsea, Okla.	208.55	307.97
Powell H. J. Trustee, San Antonio	4,137.39	5,624.25
Parks, J. T., et al, (Henry Riley, Recv.) Amarillo	7,326.31	10,385.96
Paggi, Chas. & Co., Beaumont	1,408.51	1,690.32
Paggi Bros. Oil Co., Beaumont	11,837.28	14,204.76
Philp Bros., Beaumont	2,504.42	3,005.30
Phillips, W. G. & J. B. Milam, Chelsea, Okla.	112.25	163.88
Pemeta Oil Company, Fort Worth	9,263.95	13,894.25
Peery, Thos. H., Wichita Falls	1,403.05	2,188.75
Producers Supply & Tool Co., Marietta Ohio	3,214.19	4,919.54
Paull Oil Company, Graham	23,860.37	38,313.96
Pitzer & West, Breckenridge	19,583.33	27,200.00
Palo Duro Oil Company, Amarillo	12,428.46	12,890.88
Pure Oil Company, Chicago, Ill.	1,851,071.75	1,554,928.93
Prairie Oil & Gas Co. (Prairie Shamrock Operating Acct.) Independence, Kans.	89,312.53	112,928.49
Palo Duro Oil Company, Amarillo	10,427.02	10,547.20
Pantex Oil Company, Fall River, Mass.	15,086.84	18,173.75
Pennowa Oil & Gas Co., Skiatook, Okla.	20,407.51	23,497.33
Phillips, J. R. (Currie) Amarillo	6,306.11	6,206.06
Park Petroleum Corp. (9-30-28) Wichita Falls	1,479.44	1,983.78
Park Petroleum Corporation (6-30-28)	1,550.33	2,021.84
Park Petroleum Corp. (3-31-28)	1,927.36	2,448.11
Park Petroleum Corp. (12-31-27)	2,122.66	2,737.37
Park Petroleum Corp. (9-30-27)	1,977.49	2,560.57
Park Petroleum Corp. ((6-30-27)	1,951.06	2,507.31
Pace, Geo. L., Wichita Falls	782.54	1,319.71
Pois Fine and Schulz, Wichita Falls	1,095.12	1,708.39
Pois and Johnson, Wichita Falls	657.80	1,026.16
Pandem Oil Corporation, Wichita Falls	23,710.48	35,190.02
Pilkington, F. L., Burkburnett	2,121.08	2,969.51
Pelwin Oil Corporation, Wichita Falls	614.50	860.30
Pelwin Oil Corporation, Wichita Falls	111.95	163.44
Payne, F. G., et al, Wichita Falls	4,156.38	6,662.48
Palmer & Burch, Inc., Wichita Falls	22,127.86	34,681.29
Perkins & Cullum, Wichita Falls	35,771.35	55,797.84
Prairie Oil & Gas Co., Independence, Kans.	1,307,998.16	1,259,002.79
Panhandle Refining Company, Wichita Falls	107,392.60	158,031.53
Petroleum Producers Co., Wichita Falls	107,965.42	161,988.34
Phillips Petroleum Co., Bartlesville, Okla.	1,565,149.92	1,891,644.65
Quartet Oil Company, Tulsa, Okla.	8,131.10	13,450.30
Quinn, J. W., et al, Eastland	10,995.92	19,143.78
Quincy Oil Co., Electra	195.84	303.50
Red Bank Oil Co. (4-1-28 to 1-12-29), Tulsa, Okla.	98,248.24	62,209.49
Rockwell, J. A. & Co., Warren, Pa.	2,487.52	3,567.52
Ramsey & Decker, Breckenridge	7,268.42	10,931.45
Ray & Massie, Wichita Falls	24,940.50	33,220.16
Ryan Consolidated Pet. Corp., Tulsa, Okla.	101,967.82	150,755.54
Root, C. M., Eastland	10,714.00	16,347.00
Root, C. M., et al, (Root Drug Co.) Eastland	13,981.00	20,874.00
Root, C. M., et al, (Root & Fehl) Eastland	20,174.00	31,003.00
Root, Rhodes, et al, Eastland	17,247.00	28,086.00
Root & Rhodes, Eastland	4,331.00	6,608.00
Riverbed Lease of A. L. Hawse, Fort Worth	67,991.00	44,194.15
Ross Amigos Oil Co., Laredo	11,401.04	11,401.04
Ross Segunda Oil Co., Laredo	698.72	698.72
Ross, James F., Laredo	3,813.21	3,813.21
Red Rock Oil Company (8-1-28 to 12-31-28) Tulsa, Okla.	959.95	1,017.30
Russell & Wilson, Wichita Falls	4,364.33	5,921.44
Rosenberg, Jacob, Tr., Tulsa, Okla.	32.59	44.25
Rosenberg, Jacob, Tulsa, Okla.	77.75	108.38
Robertson, R. R., Wichita Falls	10,851.70	15,112.48
Rhader & Carey, Wichita Falls	5,829.87	8,121.00
Reeder & Scarborough, Wichita Falls	1,203.39	1,824.59
Robert Oil Corporation, Breckenridge	59,481.48	93,873.92
Riggs & Oliphant, Graham	20,086.96	93,873.92
Rathke Oil Company, Wichita Falls	26,622.42	41,519.30
Ramming & Saunders, Wichita Falls	3,706.88	5,958.54
Ramming, Staley & Ramming, Wichita Falls	620.24	910.97
Ramming, W. F., Wichita Falls	34.99	51.41
Rex-Tex Oil Company, Winchester, Ky.	868.29	1,526.16
Ramsel, W. T. Oil Co., Rockdale	1,854.34	2,614.61
Republic Production Co., Houston	996,724.50	888,927.17
Rycade Oil Corporation, Houston	188,183.89	210,029.08
Ramming, R. W., Wichita Falls	7.83	10.64
Randado Oil Corporation, Oklahoma City, Okla.	35,528.68	35,528.68
Rowe, J. G., Wichita Falls	622.33	853.94
Rio Bravo Oil Co., Houston	451,203.73	557.489.04
Rhodes & Highers, Breckenridge	6.247.81	9,246.75

Name, Address—	Barrels	Value
Rochmill, Henry, Tr., Ft. Worth	356.62	617.86
Roeser & Pendleton, Inc., Ft. Worth	385,899.87	589,927.40
Rockdale Junior Oil Co., Rockdale	291.02	395.78
Ruyle Farm & Oil Co., Wichita Falls	7,568.19	11,805.23
Riner & Bailey, Wichita Falls	22,733.50	33,712.61
Red Bank Oil Company, Tulsa, Okla.	18,241.48	27,550.15
Red River Oil Company, Tulsa, Okla.	17,969.34	27,680.00
Reclamation Company, Ft. Worth	6,317.20	8,949.27
Reserve Petroleum Company, Tulsa, Okla.	718.81	1,167.83
Rockdale Oil Co., Rockdale	None	
Reeder, et al, Wichita Falls	7,769.84	12,031.01
Robinson, O. D., Pittsburgh, Pa.	1,613.16	1,839.00
Reno Oil Company, Sistersville, W. Va.	62,838.00	97,964.48
Rock Creek Oil Corporation, Amarillo	18,928.41	14,858.80
Rowe, M. D., (9-30-28), Wichita Falls	1,086.34	1,574.03
Rentex Oil Co., San Antonio	7,417.28	8,974.92
Ross & Slicker Oil Co., Cisco	741.92	1,145.11
Ross, C. E., Burkburnett	632.87	918.27
Ruthada Oil Co., Oklahoma City, Okla.	15,217.03	16,887.79
Rountree, White & Simpson, Rockdale	943.19	1,329.90
Ridgeway, G. R., Wichita Falls	1,070.34	1,582.17
Reiter-Foster Oil Corporation, Tulsa, Okla.	13,808.50	19,518.52
Ramsey, E. H., Rising Star	660.12	1,128.79
Roy Long Oil Co., Navasota	2,811.25	4,104.43
Ruby Oil Company, Minerva	244.72	345.03
Reinhart, M. J., Tr., Oklahoma City, Okla.	558.36	845.42
Ranell Oil Company, Oklahoma City, Okla.	4,853.78	7,326.51
Rubsam & Hunter, Wichita Falls	2,107.30	3,210.20
Robinson, Arthur D., Dallas	9,387.08	11,068.83
Rose, F. P., Wichita Falls	979.23	1,108.46
Roberts, H. W., Wichita Falls	3,855.82	6,197.94
Rex Petroleum Corp., Vinton, La.	28,032.18	33,638.61
States Oil Corporation, Eastland	43,037.36	66,990.51
Sheldon, W. J., Electra	2,750.60	4,310.59
Sterling Oil & Gas Company, Abilene	163.27	226.14
Smith, W. B., et al, Eastland	336.14	491.05
Shaw Oil Company, Wichita Falls	22,079.94	36,259.68
Swicegood, F. L., Tr., Eastland	495.71	737.14
Schlicher Oil Co., Beaumont	66.07	96.88
Schermerhorn Oil Company, Tulsa, Okla.	362,089.99	242.513.93
Snider, C. W., Wichita Falls	1,399.08	2,288.44
Schaffner-Wilson, et al, Wichita Falls	2,079.10	3,524.69
Supreme Oil Company, Orange	2,385.06	2,862.05
Sinclair Oil & Gas Co., Tulsa, Okla.	140,764.28	226,028.34
Sun Oil Company, Dallas	1,013,903.10	1,119,358.37
Stribling, J. C.—Hautier No. 1 Well, Llano	643.54	894.49
Sneed Royalty Company, Tulsa, Okla.	1,249.99	1,683.25
Skelly Oil Company, Tulsa, Okla.	1,262,531.57	1,010,898.62
Sullivan, M. J., Kansas City, Mo.	348.87	472.02
Staley, Wynne & Company, Wichita Falls	121,065.14	167,780.94
Staley, J. I. & Company, Wichita Falls	3,847.57	5,636.08
Shell Petroleum Corporation, St. Louis, Mo.	3,358,633.66	2,342,380.47
Sawyer, W. G., (10-1-28 to 12-31-28), Brownwood	1,752.88	2,745.84
Scarborough & Smith, Burkburnett	624.23	764.67
Scarborough, W. A., Burkburnett	1,642.55	2,450.78
Shasta Oil Company, Wichita Falls	648.35	939.12
Seaboard Oil & Gas Company of Texas, Wichita Falls	26,482.97	41,090.81
Stekoll, Harry, Borger	959.77	933.74
Simms, E. F., Houston	27,234.58	34,971.57
Scott & Nance, Graham	1,658.29	1,479.28
Scott & Britton, Graham	168.60	237.70
Sprague Oil Co., Ardmore, Okla.	73,354.86	47,680.66
S. & W. Oil Company, Amarillo	19,948.94	18,649.08
Snow Oil Company, Graham	526.97	752.95
Sheldon, C. P., Electra	8,897.06	13,175.07
Sun Burst Oil Co., Amarillo	2,471.78	2,400.80
Stoops, J. P., Ranger	231.73	307.27
Slick, T. B., et al, Oklahoma City, Okla.	7,960.39	12,501.66
Stephens & Fisher, Wichita Falls	1,048.73	1,406.74
Selby Oil & Gas Co., Tulsa, Okla.	8,826.00	14,949.52
Sink, Joel, Corsicana	227.00	332.00
Stroube & Stroube, Corsicana	38,363.15	53,923.03
Steed, Paul P., Wichita Falls	2,027.19	2,933.96
Steed, Paul P., Wichita Falls	550.22	710.77
Salado Oil Company, San Antonio	1,766.65	1,947.74
St. Marys Oil & Gas Co., St. Marys, W. Va.	34,284.12	41,121.33
Southern Crude Oil Purchasing Co., Ft. Worth	2,903,917.18	1,887,546.21
Schimmel Production Corp., Ft. Worth	29,972.74	34,894.15
Simms Oil Company, Dallas	846,749.82	716,493.91
Shamrock Co., Inc., Wichita Falls	None	
Snowden & McSweeney Company, New York N. Y.	142,479.36	216,935.81
Shaw, T. G., Ft. Worth	100,018.58	120,008.22
Smith-McIntosh & Thomas (Bean Ch. Lease), Cameron	1,596.90	2,251.67
Smith, McIntosh & Thomas, Cameron	738.34	1,004.12
Spring Creek Oil Company, Amarillo	6,328.83	6,307.93
Stump, E. J. & Harry Hines, Wichita Falls	12,892.66	19,467.92
Steele, Charles F., et al, (6-30-28), Rosston, Ark.	963.96	1,211.54
Ark.	780.98	1,077.75
Steck, Charles F., et al, (9-30-28), Rosston, Ark.	901.65	1,217.22
Steele, Charles F., et al, (6-30-28), Rosston, Ark.	953.96	1,211.54
Seybert Bros., Mooringsport, La.	7,423.69	12,322.18
Sedwick Oil Company, Tulsa, Okla.	15,082.26	20,434.33
Sinclair Oil & Gas Co., Houston	156,436.14	188,481.74
Smith, E. L. Oil Co., Inc., Mexia	174,088.32	185,054.85
Sunny Jim Oil Co., Tulsa, Okla.	7,306.43	6,138.08
Summerfield Oil Co., Tulsa, Okla.	327.53	498.93
Shertzer Bros., Dewey, Okla.	9,972.96	14,678.53
Simmons, T. K., Tulsa, Okla.	4,265.97	5,966.96
Slicker, Homer, Cisco	967.79	1,302.61
Stock, Anna B., Cisco	441.51	643.01
Sigler Oil Co., San Antonio	1,085.25	1,374.93
Saxet Oil Co., Houston	29,361.59	32,284.76
Smith, Mrs. Jas L., Amarillo	10,646.51	12,245.55
Smith & Bynum, Amarillo	2,940.94	2,802.09
Southern Exploration Co., Houston	1,039.60	1,291.43
Smith, R. E., et al, Houston	17,722.75	22,666.88
Stamphli & Kell Oil Co., Wichita Falls	50.44	60.00
St. Albans, Mrs. Ruth, Laredo	1,290.07	1,290.07
Stratton, Ed F., Pioneer	349.90	440.87
Summit Oil & Refining Corporation, Amarillo	5,417.03	5,736.24
Schoolfield, R. E., Wichita Falls	255.41	354.09
Sessions, I. P., Rockdale	362.90	493.54
Southern Petroleum Exploration, Inc., Sistersville, W. Va.	4,580.39	6,425.48
Stidham & Thrasher, Electra	368.66	239.63
Skinner, E. W. Oil Co., Saratoga	5,294.43	5,906.36
Sand Creek Oil Company, Amarillo	4,965.09	4,871.73
St. Louis Oil & Dev. Co., Wichita Falls	435.13	616.80
Standard Oil Land & Leasing Co., Electra	254.61	397.14
Shappell Oil Co., Wichita Falls	46,008.79	70,557.47
Schaffner, E. N., et al, Cross Plains	1,324.89	1,994.92
Star Drilling Co., Wichita Falls	4,291.40	6,694.59
Saratoga Oil Co., Wichita Falls	964.84	1,505.14
Somerset Crude Oil & Refining Co., Somerset	3,119.50	3,596.92
Swanner, John L., Wichita Falls	2,312.11	3,487.55
Stella Oil Company, Beaumont	15,042.29	18,050.74
Sircovich, A. & Mrs. F. M. Thomas, Houston	397.30	378.99
Shoup, O. H., Jr., Colorado, Springs, Colo.	3,527.92	5,579.24
Shattuck, R. H., Dallas	2,895.20	4,082.21
Speed, C. D., Corsicana	233.47	342.56
Stephens Oil Co., (9-30-28), Sourlake	496.60	595.92
Stephens Oil Co., (12-31-28), Sourlake	438.34	526.01
Strelsky, Joe & H. W. Hefly, Rockdale	523.40	759.47
Seaboard Oil & Gas Company of Texas, Wichita Falls (9-30-28)	28,027.32	42,036.47
Staley, J. A., Wichita Falls	2,292.91	3,457.32
Stovall, E. C., Graham	25,268.66	39,146.81
Swicegood, F. L., Trustee, Eastland	681.13	964.59
Saigh, N. A., San Antonio	1,999.94	2,582.47
Smith, Mrs. Jas. L. Oil a/c, Amarillo	14,403.53	14,949.56
Smith & Bynum, Amarillo	3,106.20	2,648.90
Superior Oil Producing, Tulsa, Okla.	2,372.49	3,557.62
San Balt Petroleum Company, Kansas City, Mo.	592.16	419.68
Stock, H. I., Cisco	2,714.38	3,705.55
Standiefer-Atkinson-Daniel Oil Corp., Breckenridge	7,408.06	10,552.16
Shinola Oil Co., Graham	391.84	513.57
Syndicate Oil Corporation, Rochester, N. Y.	422.51	678.96
Skia-Tex Petroleum Co., Amarillo	38,660.50	42,795.25
Somerset Oil Co. of Mass., Easthampton, Mass.	110.76	112.81
Steed, Paul P. & A. R. Gaus, Wichita Falls	4,091.91	5,939.64
Smith, M. L. V., Vernon	786.84	1,070.10
Swensondale Petroleum Corp., Caddo	9,504.70	13,780.04
The Texas Company, Houston	4,067,572.27	4,997,079.33
Teatsorth, L., Eastland	665.39	1,078.55
Teatsorth, L., et al, No. 1, Eastland	2,401.03	4,091.88
Tidal Osage Oil Company, Tulsa, Okla.	8,001.12	9,490.80
Tidal Oil Company, Tulsa, Okla.	225,536.40	189,370.39
Tower & McKanna, Inc., Wichita Falls	9,723.93	15,879.44
Tholl Oil Co., Beaumont	4,693.00	7,842.56
Terry, H. W., Sourlake	10,843.00	12,469.40
Transcontinental Oil Co., Tulsa, Okla.	33,424.91	47,161.21
Transcontinental Oil Co., Tulsa, Okla.	5,006.53	7,135.94
Transcontinental Oil Co., Tulsa, Okla.	1,559,865.87	1,013,912.82
Tucker Oil Co., Wichita Falls	79,959.03	114,650.00
The Texas Electra Company, Newark, Ohio	282.39	447.42
Texas Fidelity Oil Corp., Louisvile, Ky.	10,631.39	17,875.81
Timms-Dietsch Oil Corp., Amarillo	3,145.00	4,080.30
Timms, L. W. Oil Corp., Amarillo	3,604.00	4,900.93
Thomasson, E. M. & Co., Inc., Denver, Colo.	779.58	1,305.70
Timount Petroleum Company, Shreveport, La.	6,516.51	11,251.40
Two Republics Oil & Gas Co., Laredo	10,465.76	10,465.76
Travelers Oil Company, Amarillo	11,042.32	12,398.12
Texas Pacific Coal and Oil Company, (Other Companies for), Thurber	74,513.50	111,308.82
Texas Pacific Coal & Oil Co., Thurber	310,061.33	342,765.14
Theis Oil Company, Sourlake	1,798.37	2,158.04
The Triangle Petroleum Co., Inc., Ft. Worth	757.48	1,143.79
Tegler, T. E., San Antonio	24.00	24.00
TransBay Oil Company, Galveston	90.00	108.00
Taylor-Link Oil Company, Houston	47,203.22	30,740.59
Texas Consolidated Oil Co., San Francisco, Cal.	15,285.09	24,144.61
Texas Unity Oil Company, Dallas	2,973.72	4,635.20
Towns, M. K., Luling	10,350.53	12,146.97
Texon Oil & Land Co. of Texas, Big Lake	201,722.86	121,677.43
Timblin, W. E., Wichita Falls	159.78	249.27
Tripplehorn, J. W. & D. R., Ft. Worth	2,320.09	3,278.34
Tidwell, H. L., Tr., Graham	1,807.63	2,547.07
Thompson, J. E., Humble	686.00	823.89
Texas Petroleum Development Co., Cameron	5,098.35	7,268.81
Tate-Weekly & Tubb, Ft. Worth	7,287.60	5,830.08

Name, Address—	Barrels	Value
Taylor-Sibley Syndicate, Dallas	2,442.82	3,810.78
Tidwell, R. V., Tr., Graham	5,003.52	7,488.67
Tannehill, L. B., Albany	65,706.00	98,753.69
Tower & McKenna, Inc., Wichita Falls	5,790.15	9,384.03
Texota Petroleum Co., Electra	338.86	545.58
Trinity Production Co., Wichita Falls	741.68	1,143.15
Triangle Oil & Gas Co., Rockdale	1,415.73	1,969.21
Trinity Townsite Company, Dallas	757.13	1,109.21
Tillery, L. J. Oil Co., Inc., Beaumont	9,003.65	10,881.43
Turman, L. C., (6-30-28), Ft. Worth	11,608.21	6,964.93
Teci Production Co., Breckenridge	2,948.83	4,173.96
Thaxton, W. H., Est., Austin	236.32	345.02
Texas Oil Corporation, Dallas	157.17	205.99
Tucker, G. A., Dallas	1,974.89	2,184.13
Tyson Oil Co., Sourlake	495.66	594.79
Tidwell, H. L., Trustee, Graham	2,886.44	3,866.08
Thomas, J. A., Burkburnett	2,408.41	2,501.82
Tillman, J. W., Humble	530.07	616.82
Turman, L. C., Ft. Worth	78,219.91	50,842.94
Tucker, W. B., Dallas	1,892.96	2,440.41
Talley & Irick, Shreveport, La.	154.16	209.60
United Oil & Fuel Co., Sourlake	1,212.82	1,455.37
U. S. Royalties Corp., Tulsa, Okla.	595.17	738.04
United Producers Co., Wichita Falls	17,323.72	26,883.28
Union Production Co., Rockdale	5,148.31	7,207.63
United Royalties Corp., Wichita Falls	1,644.76	2,709.52
Unice & Carpenter, Houston	5,397.00	6,468.99
Unity Oil Company, Beaumont	21,461.00	25,780.00
Underwood Drilling Co., (Erwin Ls), Wichita Falls	795.96	1,086.12
Underwood Drilling Co., (U. C. Ward Ls), Wichita Falls	1,959.36	2,860.66
Underwood Drilling Co., (Ward A. Ls.), Wichita Falls	4,676.16	6,950.95
United Oil Corporation, Wichita Falls	1,594.22	2,325.29
Union Oil & Mining Co., Tulsa, Okla.	8,164.61	11,103.87
United Petroleum Co., Brownwood	171.68	216.31
Van Cleve Trust, Baltimore, Md.	533.16	829.39
Van Wormer, F. E., Wichita Falls	1,378.74	2,275.15
Virginia Oil Assn., Ft. Worth	2,807.84	4,395.17
Valerio, Inc., San Antonio	564.37	622.47
Val Verde Oil Co., Del Rio	1,873.00	2,171.40
Vacuum Oil Co., Houston	17,192.55	30,050.19
Valerio, Inc., (9-30-28), San Antonio	595.49	651.52
Vitek Oil Co., (10-1-27 to 10-15-29), Amarillo	.....	830.16
Vergate Oil Co., Tulsa, Okla.	6,101.71	9,138.49
Waggoner Refining Co., Electra	528,917.53	754,838.36
Wise & Jackson, Sapulpa, Okla.	4,530.41	6,291.35
Wear, G. F., et al, Brownwood	192.16	196.00
White, Alexander S., Tulsa, Okla.	13,436.42	13,604.50
Witherspoon Refining Co., San Antonio	10,913.04	12,985.41
Witherspoon Oil Co., San Antonio	18,440.12	25,716.46
Williams, Burt, Wichita Falls	939.93	1,159.61
Woodley Petroleum Co., Shreveport, La.	19,573.31	32,745.74
Western Oil Sales Corp., Wichita Falls	3,204.92	4,396.87
Westervelt-Noble, et al, Oklahoma City, Okla.	3,137.99	4,588.24
Wentz, L. H., Ponca City, Okla.	25,441.86	35,154.64
Wilson, Lee, et al, Wichita Falls	8,280.50	12,494.56
Whitehill Oil Corp., Tulsa, Okla.	7,469.64	10,820.38
Walker, B. S., Breckenridge	1,444.24	1,994.67
World Oil Company, Ft. Worth	2,293.92	2,156.28
Watts Oil Co., Houston	12,582.53	15,015.88
Williams & Williams, Amarillo	12,715.32	9,278.26
Ward Oil Corporation, Ardmore, Okla.	22,847.07	18,277.65
Wallace, Dr. Chas., et ux, Wichita Falls	24,785.18	38,642.36
Whaley Mineral & Realty Trust, Ft. Worth	2,580.14	3,756.98
Weldon Oil Co., Saratoga	11,785.76	11,950.44
Washoma Petroleum Co., Enid, Okla.	2,407.36	3,755.50
Weister, E. P., Tulsa, Okla.	3,577.81	5,134.54
Weiler, H. J., Wichita Falls	315.59	450.76
White & Duncan, Wichita Falls	4,863.08	7,078.68
Why Not Oil Co., Mexia	8,872.00	12,869.40
Wood, Benton, Lesh & McCall, Nocona	7,196.62	6,476.96
Wolfe, A. T. & Son, Wichita Falls	2,253.92	3,335.72
Christi, C. B., Wichita Falls	11,981.40	17,327.25
Wahpoo Oil Co., Rockdale	1,424.55	2,079.84
Woods, C. D. & C. C., Ranger	893.04	1,214.53
West, J. F., Cisco	289.44	433.04
Wolfe, D. L., Olney	1,895.82	2,520.85
White Eagle Oil & Ref. Co., Kansas City, Mo.	58,905.00	60,956.00
Woodburn Oil Corp., Dallas	4,454.47	6,614.81
Warner-Quinlan Co. of Texas, Dallas	225,023.83	146,265.00
Wampem Oil Corp., Dallas	596.02	871.59
West, Bessie M., Mrs., Houston	2,159.00	2,590.80
Wheelock & Collins, Corsicana	18,117.66	27,467.54
Wilson Drilling Co., ("Comet" Lease) Wichita Falls	3,997.58	6,436.29
Wilson Drilling Co., K. K. "A55 & "B" Lease, Wichita Falls	3,240.69	5,190.79
Wilson Drilling Co., K. K. "C" Lease, Wichita Falls	551.07	797.42
Wilson Drilling Co., "Rathke" Lease, Wichita Falls	3,193.66	4,972.86
Wilson Drilling Co., Snedeker Lease, Wichita Falls	145.30	204.87
Wilkins, L. A., Burkburnett	2,463.64	3,621.55
White, Ralph W., (9-30-28), Thrift	935.91	1,447.64
White, Ralph W., Thrift	1,171.23	1,829.34
Westheimer & Daube, Ardmore, Okla.	1,373.85	1,868.32
Wilcox, H. F. Oil & Gas Co. of Texas, Tulsa, Okla.	65,707.79	95,855.39
Witcher & Michel, Wichita Falls	329.31	526.02
Witcher, Annie L., Gdn., Wichita Falls	6,970.28	11,025.73
Worth Oil Co., Wichita Falls	160.00	216.00
Webb, J. K. & J. H. Bryant, Corsicana	385.00	385.00
Woody, W. C., Wichita Falls	1,403.05	2,188.75
Wo-Mac Oil Co., Wichita Falls	1,981.55	3,087.77
Wilson-Broach Co., Beaumont	17,042.94	20,451.53
Watson, M. B., Ft. Worth	550.00	550.00
Wetzel, Sophie, Amarillo	6,265.33	6,119.42
Wills Oil Co., Rockdale	1,831.08	2,581.81
Williams, J. H., Dallas	4,617.20	6,891.48
Woods & Bennett, Humble	6,807.91	8,170.86
Weaver & Pois, Wichita Falls	2,508.72	3,694.90
Wichita Petroleum Co., Tulsa, Okla.	1,298.27	1,846.20
Williams, J. H., (9-30-28), Dallas	5,092.60	7,484.46
West, J. H., Cisco	7,579.72	10,968.18
Wakefield, M. E., et al, Cross Plains	328.22	540.83
Western Oil Corp. of Texas, Tulsa, Okla.	505.19	762.82
Weiler, J. G., et al, Cross Plains	2,242.87	3,647.78
Webb Oil Co., Humble	4,924.41	5,909.28
Webb, J. R., Corsicana	362.96	475.47
Waggoner Refining Co., Inc., Electra	96,613.91	134,403.72
Woodley Petroleum Co., Shreveport, La.	6,742.86	11,215.60
Weed-Gayle Oil Co., Beaumont	8,859.55	10,531.46
Windham & Pilkenton, Burkburnett	2,140.42	3,206.92
Woodward & Lee, Houston	11,705.09	12,679.87
Wilbarger Oil Co., Wichita Falls	2,349.03	2,951.14
Walker, A. C., Albany	2,464.23	3,398.21
Yount-Lee Oil Co., Beaumont	3,210,411.42	3,922,227.90
Young Brothers & Alexander, Inc., Ft. Worth	6,742.90	11,215.61
Zadie Belle Oil Co., Ft. Worth	591.00	980.53

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OKLAHOMA QUARTERLY PRODUCTION REPORT FOR FOURTH QUARTER, 1928

Following is a list of companies reporting to the Oklahoma Corporation Commission on Gross Production Tax from oil and gas production. The list gives those companies which reported production valued at more than $5,000 or royalty of more than $2,000.

Total Barrels Listed .....51,455,112 Value, including gas $88,263,678

Asterisk (*) opposite the name indicates royalty. Dagger (†) indicates value shown includes gas production.

Name, Address—	Barrels	Amount
Alma Royalties Corp.* N. Y. City	.....	20,383.02
American Indian Royalties Inc.,* St. Louis, Mo.	.....	12,656.27
American Oil Development Co., Pittsburgh, Pa.	5,514.19	7,782.36
American Refining Property, W. M. Priddy Estate, Wichita Falls, Texas	4,301.22	6,579.02
S. W. Anthony, Mounds	.....	10,090.94
Arthur Oil Co., Sistersville, West Va.	10,043.59	†14,527.74
Atlas Royalty Corp.,* Tulsa	.....	7,761.31
Accumulative Royalty Corp.,* Tulsa	19,496.00	28,211.56
Atlantic Oil Producing Co.,* Philadelphia, Pa.	.....	3,246.20
Joe Abraham, Estate,* Bristow	.....	5,567.73
H. Y. Arnold,* Tulsa	1,313.24	2,440.94
Walter Andrews,* Welasco, Texas	.....	3,571.23
Craig and Andrews Rec.,* Chandler	.....	2,264.01
S. A. Apple,* Oklahoma City	.....	16,131.88
H. N. & Ethel B. Andrews,* Newkirk	.....	10,573.17
American Royalty & Petr. Co.,* Tulsa	2,641,87	4,387.98
Atlantic Oil Producing Co., Dallas, Texas	.....	†39,897.26
Armor Oil and Gas, Duncan	4,324.43	6,773.63
Alma Petroleum Co., Oklahoma City	1,958.77	†11,828.39
B. N. Altom,* Tonkawa	.....	11,699.23
E. E. Adams,* Tulsa	.....	3,106.39
Argo Oil Co., Denver, Colo.	17,172.48	†38,673.36
Peter Adamson Jr., Tulsa	.....	5,049.74
American Oil Royalty Seminole Corp.,* Tulsa.	.....	9,242.81
W. O. Allen, Tulsa	.....	3,688.47
Adams Royalty Co.,* Chicago, Ill.	74,343.17	126,184.90
James M. Anthis,* Muskogee	.....	2,170.37
A. D. Adcock,* Okmulgee	.....	6,640.84
N. L. Amster, Ardmore	6,663.13	8,325.51
Atlantic Oil Prod. Co., Dallas, Texas	381,386.40	556,126.60
Atlantic Oil Prod. Co.* Dallas, Texas	7,871.67	†14,438.08
(See other report on page 1)		
Arkansas Fuel Oil Co., Shreveport, La.	7,890.03	8,452.29
Amerada Petroleum Corp., Tulsa	962,176.54	†1,516,465.22
Amerada Petr. Corp.,* Tulsa	9,472.42	14,500.94
Amerada Petr. Corp., (suspense)* Tulsa	.....	12,950.47
Amerada Refg. Corp.,* Tulsa	.....	3,717.76
Martha Nadie Tully, Andrews,* Muskogee	.....	2,035.20
Bermonte Oil Co.,* Bristow	5,480.76	8,772.64
Blackwell Oil and Gas Co., Cushing	.....	480,993.60
B. B. Blair,* Tulsa	.....	3,019.40
Braman Oil Co., Inc., Tulsa	6,010.83	9,010.49
Homer Bishop,* Wewoka	.....	4,305.40
Barbara Oil Co., Oklahoma City	8,778.34	13,132.97
Geo. S. Bole,* Tulsa	1,842.22	†3,326.87
Geo. S. Bole, Tulsa	11,796.19	†18,587.04
F. G. Beverlin,* Wichita, Kans.	.....	13,921.52
W. L. Beaver and Don Lawhead,* Okla. City	.....	7,093.51
Lizzie D. Baruch,* N. Y. City	.....	2,920.80
Thos. Butcher,* Oklahoma City	.....	3,275.29
W. E. Brown Co.,* Tulsa	6,856.64	11,031.29
W. P. & Maud Brown,* Okmulgee	.....	2,227.66
Beacon Oil Co., Bartlesville	4,817.77	5,886.83
Roy Buckner,* Wewoka	.....	2,968.11
Baker and Strawn, Tulsa	8,388.29	11,190.23
Burke Hoffeld Oil Co., Tulsa	4,698.99	†6,006.22
E. A. & Anna Bradley, Tulsa	7,049.66	8,694.18
Thos. N. & Harriett Berry,* Stillwater	.....	12,074.20
Britton-Johnson Oil Co., Oklahoma City	6,236.20	5,810.79
Bart Royalty Co., Bartlesville	12,903.99	20,352.54
Mrs. Mary F. Barrett,* Austin, Texas	2,003.35	2,684.49
E. J. Blank,* Cushing	.....	9,659.26
W. L. Brittain,* Oklahoma City	.....	2,865.51
J. A. Barnett & L. M. Baker, St. Louis	.....	3,320.42
T. J. Baker c/o Central Natl. Bank, Trustee, Okmulgee	.....	7,278.40
I. L. Bramer,* Los Angeles	.....	3,877.70
A. C. Brown Oil Enterprise, St. Louis, Mo.	4,535.53	5,714.76
Katie Snell nee Brown,* Dustin	.....	2,740.98
J. J. Brown, Jr.,* Wichita, Kans.	.....	3,370.39
J. H. Bellis,* Cushing	.....	2,106.57
Hubert Barnum,* Natchez, Miss.	.....	3,479.75
Bart Royalty Co.,* Bartlesville	12,903.99	20,352.54
Belco Royalties, Inc.,* N. Y. City	.....	38,587.62
James Braun, Bartlesville	.....	6,852.78
S. W. Bates,* Konawa	.....	6,661.08
Elizabeth Ballard,* Cushing	.....	4,823.18
W. I. Barker,* Ada	.....	3,732.06
D. D. Banta,* Tecumseh	.....	9,525.18
Ruth Price Banta,* Wewoka	.....	3,057.08
G. H. & Annie Barker,* Shawnee	.....	4,518.77
Bryon and Emery, Inc., Tulsa	15,063.18	†28,805.72
Bay State Oil Co., Kansas City, Mo.	4,946.17	22,318.61
J. W. Bird and Wm. Hanley, Brandford, Pa.	5,443.96	7,106.34
G. M. Berry,* Pawnee	.....	8,933.47
Bell Oil and Gas Co., Tulsa	4,915.69	7,475.03
James Brazell,* Oklahoma City	.....	4,225.66
E. M. Boring, Oklahoma City	15,192.11	19,935.47
R. S. and Alica Bristow,* Comanche	.....	2,526.23
W. E. Berry,* Stillwater	.....	6,969.95
H. E. Bryant,* Shawnee	.....	2,666.75
W. O. Broyles,* Stillwater	.....	3,167.68
Bridwell Oil Co., Wichita Falls, Texas	16,527.34	20,471.98
Earle Berryhill,* Sapulpa	.....	3,448.20
Mary Blasdell,* Blackwell	.....	3,344.47
L. J. Burkhalter,* Blackwell	.....	3,033.78
J. F. Buck,* Shawnee	.....	2,305.09
E. R. Bechtel,* Blackwell	1,640.30	†2,788.44
Helen Bristow,* Comanche	.....	2,460.37
John B. & Michael Brandenburg and Sons, Norman, Okla.	.....	24,339.95
Wm. Buck,* Wetumka	.....	6,684.12
Bissett, Lytle and Gray, Tulsa	9,091.31	11,297.61
Frank Buttram,* Oklahoma City	.....	18,638.92
Frank Buttram, Oklahoma City	3,608.05	5,431.91
J. G. Beard and S. I. Kolb, Duncan	9,868.76	16,111.81
J. G. Beard, S. I. Kolb & J. L. Crump,* Duncan	4,252.99	5,781.84
Beard and Crump, Duncan	2,509.38	3,011.42
Beard and Crump, Duncan	5,776.42	7,446.37
A. E. Bowers,* Wellington, Kans.	.....	2,021.97
Bolene, Refg.* Enid	.....	23,746.91
Emma and Ben Boepple,* Enid	.....	2,022.23
E. M. Billings et al,* Enid	.....	2,645.51
Walter S. Billings,* Enid	.....	2,431.27
V. E. Bolene,* Enid	....	2,095.15
I. T. Bond,* Comanche	.....	3,984.21
Phillip Brown,* Eufaula	.....	3,062.30
J. M. Bumpass,* Duncan	.....	3,380.05
J. L. Bryan,* Chickasha	.....	2,098.79
John H. Barnett,* Ardmore	.....	2,525.94
Barnsdall Oil Co., Tulsa	1,345,610.45	1,982,890.15
Barnsdall Oil Co., Tulsa	.....	78,903.34
Barnsdall Oil Co.,* Tulsa	1,949.90	†2,576.65
Babcock Bros., Denison, Texas	4,543.56	7,611.75
Geo. M. Billings, estate,* Enid	.....	3,011.34
Burke-Greis Oil Co.,* Tulsa	.....	18,055.27
Burke-Greis Oil Co., Tulsa	.....	70,433.14
Braden and Moore, Tulsa	5,922.93	8,055.29
Chas. W. Boggs, Los Angeles, Calif.	.....	6,416.24
S. J. Brown,* Duncan	.....	2,731.70
E. H. Brady, Tulsa	2,026.47	2,588.06
Black, Sivalls and Bryson, Inc.,* Bartlesville	2,970.03	4,439.22
Black, Sivalls and Bryson, Inc., Bartlesville	2,767.18	†3,902.48
Mable G. Breene, Tulsa	5,906.02	6,634.05
Frank M. Breene, Trust est., Tulsa	5,919.03	7,678.76
C. E. Burlingame Corp., Bartlesville	5,415.01	8,159.09
Berry Pet. Co., Tulsa	13,729.01	†19,612.64
T. J. Baker,* Okmulgee	.....	6,640.84
Frank A. Baker, Tulsa	49,153.93	†75,437.98
Frank A. Baker,* Tulsa	31,236.66	47,809.03
Cities Service Oil Co., Bartlesville	.....	†76,732.87
Cortez Oil Co.,* Tulsa	9,479.53	14,251.77
Cortez Oil Co., Tulsa	1,991.12	2,105.22
Creo Oil Co., Tulsa	5,664.50	6,489.92
Mary C. Cates and Wirt Franklin, by Liberty National Bank, Trustee	2,354.59	†2,979.57
L. L. Cherry,* Lindsay	3,046.60	3,219.09
V. H. Cherry,* Lindsay	.....	11,355.04
Caddo Oil Co., Tulsa	31,934.64	41,255.98
Commonwealth Trust Co., Okmulgee	4,317.01	5,144.73
Elizabeth R. Crockett Hayes, Oklahoma City	4,855.19	49,777.90
Coline Oil Co., Oklahoma City	54,287.66	49,777.90
M. K. Cruce,* Oklahoma City	.....	2,443.53
Herman D. Cornell, Exec.,* Tulsa	.....	3,599.78
Central Oil Royalties, Inc.,* N. Y. City	.....	10,733.84
Continental Oil & Refg., Independence, Kans.	4,387.05	5,210.46
J. E. Crosbie, Inc., Tulsa	.....	50,262.28
Continental Oil Co., Wichita Falls, Texas	16,532.32	†22,832.58
Continental Oil Co., Denver, Colo.	143,664.51	†207,995.73

Name, Address—	Barrels	Amount
C. Fred Chilcoat,* Wewoka	.....	2,520.49
W. S. Chitchlow, Ardmore	7,062.00	11,070.59
Cudahay Oil Co., Cleveland, Ohio	12,585.28	14,159.71
Joe Carter,* Wewoka	.....	4,415.02
Clark & Cowden, Duncan	.....	27,315.24
Anna Elizabeth Cox,* Ardmore	.....	2,749.48
Cal-Cul Oil Co.,* Okmulgee	.....	2,989.24
Cedar Gas Co., Bartlesville	.....	†4,996.81
Edwin B. Cox and Jake L. Hamon,* Ardmore	.....	41,258.64
Cushing Refg. and Gasoline Co., Cushing	.....	7,216.35
Mrs. Clara Cherry,* Shawnee	.....	2,927.29
C. C. Cherry,* Maud	.....	20,691.17
S. C. Canary, Tulsa	6,299.03	7,710.37
Cotton Belt Petr. Co., Tulsa	38,367.96	†52,263.87
W. H. Cecil,* Tecumseh	.....	2,545.25
G. W. Connelly, Caney, Kans.	.....	8,275.62
R. A. Cowden,* Shawnee	.....	5,056.41
Consolidated Gas Utilities Co., Okla. City	1,047.68	†19,624.61
V. K. Chowning,* Okemah	.....	2,050.13
Central Valley Oil Co., Cleveland, Ohio	.....	3,018.56
Canadian Royalty Co.,* London, Ontario, Can.	.....	2,409.41
Champlin and Bass, Inc., Holdenville	3,747.85	5,261.33
W. C. Shisum, Sr.,* Oklahoma City	.....	4,826.17
Chiefton Royalty Corp.,* Tulsa	.....	2,617.55
Wm. S. Cline,* Newkirk	.....	3,812.15
Commercial Drilling Co., Tulsa	4,427.63	5,311.80
Annie S. Cook,* Muskogee	.....	7,698.23
Dillard H. Clark, Jr.,* Ponca	.....	4,602.59
I. M. Clubb,* Kaw City	7,307.37	11,624.43
Laura A. Clubb,* Tulsa	.....	11,553.80
Warner Caldwell Oil Co., Titusville, Pa.	24,755.35	34,579.39
Samuel J. Caudill,* Tulsa	1,571.12	2,446.12
J. W. Coast, Jr., Trustee,* Tulsa	2,964.63	4,614.95
Conservation Oil Co., Tulsa	9,915.28	14,246.67
Columbus Royalty Co.,* Tulsa	.....	2,970.81
Carter Oil Co., Tulsa	.....	361,665.28
Carter Oil Co., Tulsa	3,508,225.03	5,013,591.42
Carter Oil Co.* (Suspense) Tulsa	.....	10,233.57
Continental Oil Co.,* Tulsa	2,690.14	5,729.53
Continental Royalties Corp.,* Tulsa	1,358.17	2,101.09
Comar Oil Co., St. Louis, Mo.	700,706.55	1,161,808.45
Champlin Refining Co., Enid	310,954.88	†558,799.46
Crude Oil Royalties Corp.,* N. Y. City	.....	12,686.26
O. L. Chambers,* Tonkawa	.....	2,359.71
W. C. Chisum, Jr.,* Oklahoma City	.....	8,326.32
Central States Production Corp., Tulsa	.....	†37,699.36
J. D. Campbell,* Seminole	.....	30,531.97
W. I. Cruce et al,* Ardmore	3,626.88	4,499.84
J. S. Crosbie Inc. of Okla., Ft. Worth, Texas	37,296.34	64,034.55
Cotton Creek Oil Co., Wichita Falls, Texas	8,009.73	10,439.60
Cumberland Petr. Co., Cleveland, Ohio	6,676.43	7,057.69
Commercial Drilling Co.* (escrow), Tulsa	.....	5,602.22
Crews Estate, Enid	8,167.61	†17,044.77
L. E. Crews Heirs,* Enid	1,166.80	2,228.69
Central Valley Oil Co.,* Cleveland	.....	3,018.56
Colonial Royalties Co.,* Tulsa	.....	7,822.25
C. W. Cargile,* Okemah	.....	2,034.70
Central Commercial Oil Co., Tulsa	7,903.11	12,136.86
Warner Caldwell Oil Co., Titusville, Pa.	30,544.38	34,579.39
R. C. Carpenter,* Elizabeth, N. J.	.....	5,786.45
H. E. Clark,* Okmulgee	.....	7,880.04
Cherokee Warren Oil and Gas,* Tulsa	7,126.44	8,381.84
Euler Davis,* Clearview	.....	4,292.22
Joseph Davis, Tulsa	4,751.31	7,411.98
H. R. Danner,* Indianapolis, Ind.	.....	3,778.07
Caroline Burford Danner,* Indianapolis, Ind.	.....	3,778.04
J. F. Darby,* Muskogee	.....	2,520.24
Delaware Consolidated Oil Co., Tulsa	44,962.06	52,261.05
W. L. Dixon,* Duncan	1,661.06	2,099.64
Elmer Dickason,* Gueda Springs, Kans.	.....	2,332.90
J. H. Dickson,* Tulsa	6,574.71	10,060.66
Mrs. V. E. Dillard,* Ardmore	.....	4,324.38
Don Oil Co., Blackwell	.....	†6,278.68
J. J. Deaner, Okmulgee	7,466.28	11,323.74
J. J. Deaner,* Okmulgee	1,782.41	2,888.55
Dixie Oil Co., Shreveport, La.	92,187.00	†156,827.52
C. E. Denney,* Alma	.....	2,462.89
A. J. Diffie,* Tulsa	.....	4,759.13
Dickson Oil Royalty Co.,* Tulsa	.....	2,457.39
W. Y. Dilley Trustee,* Waurika	.....	3,945.85
Douglas Oil Co.,* Tulsa	.....	4,004.84
V. A. Dodson,* Dustin	.....	3,941.42
Martin Diester and E. G. Ward,* Tecumseh	.....	2,655.52
J. C. Doneghy,* Tulsa	13,420.06	22,063.75
D. B. Duff,* Cleveland, Ohio	.....	5,614.30
W. R. Duke,* Wichita Falls, Texas	.....	3,232.60
Delmore Oil Co., Bartlesville	19,052.07	†30,391.52
Delk Investment Corp.,* St. Louis, Mo.	.....	3,910.50
J. F. Dowrell and Mray,* Stroud	.....	2,236.10
B. F. Davis,* Wewoka	.....	19,817.77
J. F. Day,* Earlsboro	1,895.73	3,194.70
Annie Day,* Earlsboro	3,791.48	6,389.43
Harry H. Diamond Oil Co., Holdenville	.....	5,046.55
Denver Producing and Refg., Okmulgee	23,943.99	34,466.00
Denver Producing and Refg.,* Okmulgee	.....	172,807.79
M. S. Douglas,* Weleetka	.....	4,584.29
Martin Deister and E. G. Ward, Tecumseh	.....	2,997.93

Name, Address—	Barrels	Amount
Estate of J. H. Dillard, Vida Dillard exec.,* Ardmore	.....	6,709.83
E. D. Davis Oil Co., Oklahoma City	.....	7,289.32
Doss Oil Royalty Co.,* Oklahoma City	16,486.62	21,924.57
Devonian Oil Co., Tulsa	47,208.84	64,390.96
Devonian Oil Co., Tulsa	.....	†9,220.61
C. F. Dillard,* Atoka	.....	2,087.57
C. H. Douglas,* Okmulgee	.....	8,731.38
D. T. Douglas,* Shawnee	.....	3,743.06
Deep Rock Oil and Refg., Tulsa	31,051.18	†50,058.00
Anna Maud Dourdy,* Brighton, Colo.	.....	2,270.05
J. J. Deaner,* Okmulgee	1,792.41	2,888.55
J. J. Deaner, Okmulgee	7,466.28	11,323.74
Duncan Wichita Falls Pipe Line Co., Wichita Falls, Texas	6,728.26	9,807.19
Dixie Oil Co., Inc., Shreveport, La.	92,187.00	†156,827.52
Darby Petr. Co., Tulsa	105,871.28	†249,421.04
T. T. Eason,* Enid	1,659.70	2,725.83
T. T. Eason, Enid	5,071.75	7,255.75
Lewis Emery Jr. and Sons, Bradford, Pa.	6,524.81	6,735.30
Elm Oil Co.,* Tulsa	2,301.46	3,289.44
Elm Oil Co., Tulsa	8,402.47	†11,078.13
Elliott and Vensel, Tulsa	6,652.60	7,022.27
Equitable Royalty Corp.,* Shawnee	.....	41,512.20
Enid Bank and Trust,* Enid	.....	7,828.72
A. J. Erlewine, Wilson	6,957.60	8,403.45
P. C. Elswick,* Lamont	.....	6,658.97
Empire Oil & Refg.,* Bartlesville	233,106.88	†375,912.74
W. H. Ellison,* Asher	.....	9,711.29
Eastern Royalties Corp.,* New York City, N. Y.	.....	9,695.36
Eagle Picher Lead Co.,* Henryetta	2,526.89	†7,530.25
Elaine Oil Co., Tulsa	1,770.17	2,305.22
Lea R. Ellis,* Ft. Worth, Texas	.....	8,232.08
Ellis Drilling Co., Wichita Falls, Texas	4,960.79	6,790.63
Elliott and Smith, Tulsa	5,719.76	7,965.14
Engineers Royalties, Inc.,* New York City, N. Y.	.....	3,517.64
Foster Petr. Corp.,* Bartlesville	9,794.70	14,506.85
Foster and Davis, Bartlesville	8,493.98	11,284.05
Federal Petr. Corp., Bartlesville	186,378.07	253,749.10
Wirt Franklin Petr. Corp., Ardmore	196,900.39	240,689.38
Fox Royalty Co.,* Tulsa	6,347.18	6,874.48
Frances F. Ford,* Shawnee	.....	2,876.00
K. C. Farwell,* Chickasha	.....	6,752.18
Fuhrman Petr. Co., Okmulgee	.....	259,144.36
Fox Royalty Co.,* Tulsa	.....	†4,267.88
Fred J. Frederick,* Los Angeles	.....	2,036.84
C. W. Falkenburg,* Wewoka	2,048.83	3,275.29
J. F. Fennell,* Pauls Valley	.....	2,880.91
E. E. Fenner,* Alfred, N. Y.	.....	2,884.15
Liberty National Bank, Trustee for Wirt Franklin, Oklahoma City	3,883.72	†4,783.12
H. B. Folk,* Sand Springs	2,762.86	4,378.41
G. W. Fisher,* Kingfisher	.....	18,379.56
Fixico Minors,* Okmulgee	1,323.57	1,993.95
D. W. Franchot and Co., Tulsa	33,922.10	45,127.34
S. M. Fugate, Gdn.,* Maramec	.....	2,121.18
W. W. Fondren,* Houston, Texas	2,006.41	2,684.60
J. P. Flanagan,* Tulsa	16,187.68	16,956.25
Rosie J. Franks,* Seminole	.....	9,485.06
W. H. Franks,* Seminole	.....	17,921.18
J. C. Fore,* Wewoka	.....	4,340.72
Fern Oil and Gas Co., Yale	17,041.94	24,534.60
First Natl. Bank,* Chickasha	.....	2,295.83
Fort Ring Oil and Gas, Ft. Worth, Texas	8,428.95	†11,925.82
Future Development Co., Tulsa	.....	8,031.59
D. C. Fitzgerald, Tr., Ardmore	4,752.86	6,034.85
Wirt Franklin,* Ardmore	10,585.35	13,459.99
Samuel & N. C. Fried,* Sulphur	.....	25,544.70
Alice Fleet, Gdn.,* Ada	.....	4,121.96
Alice Fleet,* Ada	.....	2,226.14
John Fleet,* Ada	.....	2,246.96
D. F. Fleet,* Ada	.....	20,985.88
Flynn Oil Co., Oklahoma City	17,846.30	25,390.07
Finance Oil Co., Gowanda, N. Y.	13,871.45	18,291.40
Laura L. Fyke,* Shawnee	.....	14,600.53
James F. Foster,* Anthony, N. M.	.....	5,492.73
J. R. Funk,* Duncan	.....	5,660.66
Flint and Bovaird, Tulsa	.....	5,176.09
Emilie Ficken,* Marshall	.....	2,265.01
Foster Oil Co., Tulsa	.....	10,433.47
Jos. D. R. Freed,* New York City, N. Y.	.....	2,587.50
Mrs. Gertrude M. Freed, New York City, N. Y.	.....	2,408.31
W. E. Grisso,* Seminole	.....	10,136.37
Galvez Oil Corp., Tulsa	4,538.78	†8,559.64
Mary B. Goforth,* Shawnee	.....	9,576.92
C. E. Gragg,* Paden	.....	2,469.09
J. D. Green,* Maud	.....	4,112.41
F. H. Greer,* Tulsa	.....	2,249.82
W. E. Grisso,* Seminole	.....	9,665.54
W. E. Grisso,* Seminole	.....	26,223.44
W. D. Grisso,* Seminole	.....	17,590.42
Gilmer Oil Co., Ardmore	.....	64,531.53
Gilcrease Oil Co., Tulsa	44,206.81	†58,273.37
H. A. Gelser,* Fillmore, N. Y.	.....	3,374.00
M. E. Gaskill, Tulsa	24,557.37	†36,571.96
J. M. Gillette,* Tulsa	4,240.28	6,045.76
Gray Oil Co., Tulsa	37,797.78	53,497.69

Name, Address—	Barrels	Amount
John P. Grieves, Terlton	.....	12,809.00
General Royalties Corp.,* Enid	.....	2,634.49
Walter H. Gant, N. B. Feagin and Knox L. Gargin,* Ardmore	.....	4,377.56
W. A. Graham Estate,* Clarion, Pa.	.....	3,771.75
Florence N. Graham, Trustee, Montebello, Calif	7,109.93	11,555.44
Ethel Glenny,* Blackwell	.....	3,344.47
V. L. Goltry, Trustee,* Enid	.....	3,462.80
B. C. Getzelman, *Algonquin, Ill.	.....	32,529.50
J. Wood Glass,* Nowata	4,655.12	5,939.67
Glass and Harmon, Nowata	9,802.36	13,164.65
Goldelline Oil Corp., Oklahoma City	9,847.90	13,377.07
Annie Gabogen & L. S. Youngblood,* Wewoka	.....	11,325.31
Glidden Oil Corp., Tulsa	7,078.54	10,129.32
Grimes and Gillespie, Tulsa	12,633.40	18,814.25
James H. Graham, Tulsa	6,227.55	9,092.21
Myrtle Green, et al,* Oklahoma City	.....	5,074.29
J. C. Greer,* Trustee for Louise Srother, Martinville, Va.	.....	2,212.69
Guaranty Trust Co.* New York City, N. Y.	.....	49,695.94
C. E. Gragg,* Paden	.....	2,323.41
C. E. Gragg, Paden	.....	11,595.91
W. E. Grisso,* Tulsa	.....	3,873.08
W. O. Graham,* Estate, Clarion, Pa.	.....	3,771.75
Florence N. Graham,* Tulsa	.....	16,925.44
Gardner Petr. Co., Tulsa	23,513.07	38,127.84
Gates Oil Co., Ardmore	9,781.02	10,865.00
C. O. Gregg, Ardmore	4,526.79	5,872.62
J. C. Gully,* Oklahoma City	.....	2,140.03
Gled Oil Co., Tulsa	17,426.78	28,733.30
Gorton Trust, Cement	8,923.87	11,532.56
S. D. Green,* Trustee, Maud	.....	2,695.29
R. F. Garland Co., Tulsa	19,003.08	†31,545.55
Max Garfinkel,* Long Beach, Cal.	.....	2,924.98
Grady County Oil Corp., Oklahoma City	.....	7,788.82
L. D. Gount,* Cushing	.....	2,604.56
Gray Oil Co., Tulsa	37,979.78	†53,497.69
F. H. Greer, Trustee,* Tulsa	.....	2,877.69
F. H. Greer, Trustee,* Tulsa	.....	3,781.50
Gypsy Oil Co., (suspense), Tulsa	4,342,644.29	†6,773,669.59
Gypsy Oil Co.,* Tulsa	1,952.59	2,530.87
Gypsy Oil Co., (suspense), Tulsa	.....	.....
Gypsy Oil Co., Tulsa	.....	.....
Gypsy Oil Co. on account of Partners, Tulsa	11,952.51	15,644.99
O. F. Graham and Crisella Graham,* Tulsa	2,748.95	2,158.18
Humble Oil & Ref., Houston, Texas	260,134.91	311,856.95
Hargreve Hudson,* Tulsa	.....	28,860.23
P. J. Hill,* Shawnee	.....	9,426.34
Dratha Harris,* Maud	.....	5,927.64
Carl B. Haun,* Blackwell	.....	3,285.91
G. W. Hearn (suspense) paid by Shell Petr.	.....	16,592.57
A. Harber, (suspense), Seminole	.....	4,159.50
Roy Harris,* Maud	.....	4,390.65
Hemlock Oil Co., Tulsa	25,467.53	29,794.31
Hefner Company,* Oklahoma City	.....	4,380.51
C. C. Harmon,* Nowata	.....	2,073.85
A. G. Hazlett, Okmulgee	.....	6,075.97
V. V. Harris,* Oklahoma City	.....	2,173.82
Highway Oil Refining Corp., Tulsa	105,235.87	161,164.08
Hall and Briscoe, Chicaksha	11,495.87	10,225.33
E. D. Atty for Thos Ryan,* Wetumka	.....	8,384.82
E. P. Harwell, Tr.,* Tulsa	.....	2,277.26
Bert Harris,* Maud	.....	2,581.69
Harris and Haun, Inc., Blackwell	.....	23,175.29
Henry and Karcher, Tulsa	167.94	†6,660.68
J. W. Henry, Altus	7,660.28	13,240.41
J. C. Hull,* Seminole	.....	4,900.74
Healdton Oil and Gas,* Enid	3,249.51	5,347.26
Healdton Oil and Gas, Enid	15,689.57	28,019.71
John F. Hayden, Tulsa	4,130.18	5,834.78
Max Hesslem,* New York City, N. Y.	.....	6,783.25
Harold Petr. Co., Blackwell	.....	17,929.15
J. P. Hammons,* Shawnee	.....	33,044.40
Harris-Hays Co.,* Okmulgee	9,956.12	15,685.96
O. R. Howard, Tulsa	214,501.48	327,255.56
E. N. Horton,* Ardmore	.....	2,413.11
Hilltip Investment Co.,* St. Louis, Mo.	.....	10,542.82
W. A. Hayner,* Shreveport, La.	.....	6,429.65
Henderson Oil Co., Marietta, Ohio	6,908.17	8,244.97
T. J. Hughes, Cushing	.....	7,591.30
Enoch M. Harris, Berwyn	.....	3,110.30
Harris Hays Co.,* Okmulgee	9,956.12	15,685.96
A. L. Harris,* Shawnee	.....	4,244.54
E. L. Harris, Trustee,* Wewoka	11,019.34	16,733.57
E. L. Harris, Trustee,* Wewoka	7,321.55	10,732.52
Hayner Royalty Corp.,* Tulsa	.....	3,907.49
Hambro Oil Co., St. Louis Mo.	4,772.31	6,013.11
Edwin Hanson,* Duncan	.....	2,782.51
W. T. Hales,* Oklahoma City,	2,052.70	†2,859.47
W. T. Hales, Oklahoma City	53,754.77	†67,553.52
E. F. Hall,* Okemah	.....	2,050.13
Harland Oil Co., Walco, Texas	16,502.58	†21,820.23
J. C. Hartley,* Garber	.....	6,106.77
S. B. Hammons,* Seminole	.....	6,447.93
J. N. Harber,* Seminole	.....	4,101.71
Harber and Riddle, Inc.,* Seminole	.....	4,126.14
R. T. Harber,* Seminole	.....	1,501.28
Homaokla Oil Co., Oklahoma City	214,102.06	257,718.26
Homaokla Oil Co.,* Oklahoma City	11,223.90	12,773.81

Name, Address—	Barrels	Amount
Robt. A. Hubbard,* Walpole, New Hampshire	.....	8,420.09
C. B. Hyde,* Oklahoma City	.....	3,414.37
A. N. Hopkins,* Davenport	1,446.92	†2,996.09
Nora Hernstadt,* New York City, N. Y.	3,663.19	4,431.1
Ward Harreld,* Oklahoma City	.....	2,228.89
Halsell and Son Oil and Gas, Vinita	4,126.15	†5,959.04
Ewing Halsell,* Vinita	1,855.40	†2,737.09
Howard Petr. Corp., Tulsa	38,534.01	58,491.04
J. A. Hull Co., Tulsa	46,212.49	†75,237.68
A. D. Horton, Agent,* Hawarden, Iowa	5,975.47	6,788.53
U. C. Homesley,* Earlsboro	.....	2,607.77
J. H. Hershey, Trustee,* Wichita, Kansas	.....	2,055.09
Houston Oil Co. of Texas, Houston, Texas	18,616.68	†28,714.95
Home Stake Oil and Gas Co.,* Tulsa	.....	189,252.52
Home Stake Oil and Gas Co., Tulsa	.....	†9,616.42
Home Gas Co. of Cushing,* Cushing	2,130.57	3,279.37
Home Gas Co. of Cushing, Cushing	.....	20,202.30
A. G. Hudspeth,* Lexington	.....	10,924.24
W. E. Hightower,* Oklahoma City	2,209.32	3,284.00
Orville Hembree,* Maud	.....	3,697.36
J. S. Hayes,* Newkirk	.....	2,826.80
Elizabeth Crockett Hayes, Oklahoma City	.....	4,855.19
E. F. Hale,* Okemah	.....	2,050.13
Leonard D. Ingram,* Cleveland, Ohio	.....	2,179.29
H. L. Ingram,* Shawnee	.....	5,138.72
Ingram Royalty Co.,* Shawnee	.....	9,044.60
J. A. & Emily Ingram,* Shawnee	.....	39,266.94
Indian Terr. Illuminating Oil Co., Bartlesville	1,239,367.42	†2,123,424.85
Iron Mountain Oil Co., Tulsa	12,234.84	15,776.82
Imperial Royalties Co.,* Kansas City, Mo.	.....	157,681.97
Harold M. Iseman,* New York City, N. Y.	.....	3,607.98
O. M. Ireland, Sapulpa	5,032.26	†7,522.09
Imo Oil and Gas Co., Covington	.....	14,205.89
Indiana Oil and Gas Co., Tulsa	26,697.50	†40,243.63
Indian Royalty Co.,* Okmulgee	176,542.64	275,289.15
Ice Drilling Co., Tulsa	4,579.85	†7,187.92
Investors Royalty, Inc.,* Tulsa	106,034.70	163,081.65
Interocean Oil Co., Tulsa	63,344.48	90,771.10
Illinois Refg. Co., Stillwater	5,777.23	6,621.72
Independent Oil and Gas Co.,* Tulsa	2,650,411.79	†4,213,483.35
Florence Jenkins and Mayme Walker,* Tulsa	.....	9,562.43
P. J. Jenkins,* Okemah	.....	2,050.13
E. H. Jennings Bros. Co., Pittsburgh, Pa.	3,934.47	†5,481.10
R. G. Jennings,* Pittsburgh, Pa.	6,529.15	†10,799.50
Randolph P. Jennings,* Beverly Hills, Calif	.....	78,682.12
U. J. Joines,* Ardmore	.....	5,517.39
L. B. Jackson, Sapulpa	.....	19,564.80
Jackson and Wise, Sapulpa	.....	5,962.73
John B. Jameson,* Concord, N. H.	56,423.34	87,061.58
Josey Oil Co., Tulsa	169,300.93	284,372.88
Josey Oil Co., Tulsa	.....	†12,861.41
Junction Oil and Gas Co., Newkirk	.....	6,477.67
C. O. Johnson and Geo. C. Pendleton Receivers*, Durant	.....	7,407.93
B. F. & Mary Eva Johnson,* Seminole	.....	4,665.52
Johnson Oil and Refg. Co., Chicago, Ill.	4,268.56	6,045.10
Johnson D. Hill,* Tulsa	2,539.31	4,010.24
Willard Johnston,* Shawnee	.....	5,614.41
Robert L. Jones,* Bristow	2,201.18	†4,405.22
R. C. Jones and Co., Inc., Cushing	.....	16,454.77
J. Edw. Jones,* New York City, N. Y.	.....	10,275.29
F. H. Korff,* New York City, N. Y.	.....	8,330.41
W. J. Kenealy,* Elizabeth, N. J.	.....	5,977.79
S. P. Kennedy, P., Bradford, Pa.,	1,833.26	2,475.45
J. T. King, Okmulgee	4,632.04	7,281.06
Kay Oil Co., Blackwell	27,355.83	44,292.87
Sarah Kirschner,* Muskogee	.....	3,430.28
Nettie Klein,* New York City, N. Y.	.....	33,317.91
Kingwood Oil Co.,* Okmulgee	2,020.83	4,512.35
King Royalty Co.,* Wichita Falls, Texas	6,396.25	8,522.42
W. B. Krebs,* Duncan	.....	5,198.53
F. H. Korff and Co., Inc.,* New York City N. Y.	.....	5,190.22
Mack Kanner,* New York City, N. Y.	.....	27,418.66
J. D. Kimmell,* Tulsa	.....	2,491.57
W. O. Kays,* Shawnee	.....	2,654.53
Kay County Gas Co., Ponca	.....	†43,410.87
Frank Knappenberger,* Seminole	.....	3,787.04
D. L. Knappenberger, Tulsa	4,175.29	5,979.02
Emma B. Kennedy, trustee,* Okemah	.....	10,618.34
L. H. Kershaw,* Muskogee	3,224.49	5,034.87
Keener Oil and Gas, Tulsa	44,145.08	†53,848.08
Keener Oil and Gas,* Tulsa	1,303.30	†1,962.81
Kewanee Oil and Gas, Titusville, Pa.	414,707.75	†705,208.78
L. Keck,* Nacona, Texas	.....	3,216.91
J. J. Klabzuba and Geo. R. Sutton,* Prague	.....	2,838.85
Sarah J. Knotts,* Stilwater	.....	6,455.92
Kreola Oil Co., Ardmore	11,391.05	7,166.19
Kisner Royalty Co.,* Garber	.....	2,494.26
Kicola-Colcord and Commerce, Ardmore	9,177.92	9,757.21
Kingwood Oil Co., Okmulgee	93,812.71	†155,306.21
King Royalty Co., Wichita Falls, Texas	6,396.25	8,522.42
C. C. Kimble,* Beggs	.....	6,381.17
Kirk Oil Co., Ardmore	5,691.31	†7,174.65
W. L. Kistler, Inc., Tulsa	4,094.35	8,038.54
Keyokla Oil Co.,* Oklahoma City	.....	3,355.17
Helen Walker King,* Orange, Calif.	.....	26,162.69
Helen Walker King, Gdn.,* Orange, Calif.	.....	8,048.81

Name, Address—	Barrels	Amount
Kinkwood Oil Co.,* Okmulgee	2,020.83	4,512.35
R. R. Kisner,* Enid	....	2,394.34
Minnie L. Kisner,* Enid	.....	2,394.34
Tom King, Okmulgee	.....	5,434.51
John L. Kirkland and Son, Tulsa	4,935.42	5,769.14
Chas. E. Knox, Enid	1,028.35	†2,165.92
Chas. E. Knok, Enid	5,061.37	†10,320.67
T. E. Laselle, Ada	13,109.14	18,453.60
C. K. Lambert et al, Okmulgee	9,446.58	15,227.16
R. W. Laughlin,* Wewoka	.....	13,527.52
John Lahman,* Altus	.....	5,456.36
Lawton Corporation, Oklahoma City	.....	6,643.18
C. H. Lebow, Tulsa	11,157.17	17,945.29
C. H. Lebow,* Tulsa	2,158.31	3,073.61
A. W. Lewis,* Harlan, Iowa	4,697.37	7,795.03
Lewis Production Co., Pittsburgh, Pa.	112,593.44	172,944.34
W. M. Longmore,* Oklahoma City	.....	5,072.76
LeFlore County Gas & Electric Co., Poteau	.....	11,113.95
Florence Lindley,* Sapulpa	.....	†9,788.56
E. L. Lindly, Alex	.....	5,722.10
Little Nick Oil Co., Chickasha	.....	25,719.67
Nites Linn,* Oklahoma City	.....	2,327.82
J. W. Linn,* Shawnee	.....	2,327.82
Ivan Linn,* Oklahoma City	.....	2,327.82
Liberty Royalties Corp.,* Tulsa	.....	18,081.29
Heirs of T. J. Little,* Wetumka	.....	2,050.13
W. T. & Lylus A. Laughlin,* Oklahoma City	.....	5,091.66
Little Fay Oil Co., & J. M. Gillette, Tulsa	.....	4,053.05
Little Fay Oil Co., Tulsa	10,185.56	9,701.70
Jos. C. Looney,* Wewoka	.....	4,640.84
Lima Oil and Gas Co., Bartlesville	.....	38,347.20
Laforce & Ferguson, Limon, Colo.	.....	5,253.97
I. B. Levy, trustee, Oklahoma City	3,005.17	5,031.81
D. B. Lack Co.,* Wewoka	.....	19,729.64
Matyse B. Lack and D. B. Lack,* Wewoka	.....	18,649.40
Link Oil Co., Tulsa	17,185.69	†24,999.36
Nancy J. Laughlin,* Cushing	.....	2,670.02
Large Oil Co., Bartlesville	3,897.19	5,660.80
Lone Eagle Oil and Gas, Duncan	4,379.44	6,391.81
C. K. Lambert and J. S. Spicer	9,446.58	15,227.16
Lewis Prod. Co., Pittsburgh, Pa.	112,593.44	172,944.34
W. S. & Amy Livingston,* Seminole	.....	6,605.30
Laurel Oil and Gas, Tulsa	98,458.62	†149,312.93
T. J. Little, Heirs,* Wetumka	.....	2,050.13
Patty Spence Ludey, Marietta, Ohio	4,784.59	5,925.42
Park B. Lamberton,* Tulsa	1,366.89	2,159.93
W. T. & Lyles A. Laughlin,* Oklahoma City	.....	5,091.66
Lone Star Gas Co., Dallas, Texas	10,261.22	†16,670.45
A. M. Landon, Independence, Kans.	.....	9,108.13
L. H. Love, Ardmore	2,620.60	†5,468.89
Lilami Oil Corp., Oklahoma City	13,772.26	16,219.04
Louisiana Oil Refg. Co., Shreveport, La.	110,440.62	113,815.99
Mid-Continent Petr. Corp., Tulsa	1,473,696.38	2,126,956.47
Mid-Continent Petr. Corp.,* Tulsa	.....	7,731.03
Mid-Continent Petr. Corp., Tulsa	.....	†514.30
(See other reports on following page)		
Midco Oil Corp., Tulsa	16,031.00	25,286.82
Malernee Oil Co., Oklahoma City	5,805.00	†8,937.66
Mid-Kansas Oil and Gas, Findlay, Ohio	464,274.96	†726,950.56
Marland Prod. Co., Ponca	384,765.35	†682,043.36
Magnolia Petr. Corp., Dallas, Texas	4,825,136.32	†7,239,282.81
Annie Meyer,* Sapulpa	.....	2,787.19
Mul-Berry Oil Co., Cushing	.....	64,663.03
Murphy Oil Co. of Pennsylvania, Philadelphia, Pa.	6,246.13	7,313.36
E. L. Mayes, Tulsa	.....	84,964.03
Clifford Mooers, trustee, Wichita Falls, Texas	4,656.04	6,208.77
Dudley O. Morgan, Tulsa	.....	24,369.49
Dudley O. Morgan, Tulsa	.....	2,504.41
McGraw Oil Co., Tulsa	20,668.52	27,853.97
C. L. McMahon and C. L. McMahon, Inc.,* Tulsa	8,312.16	13,832.46
C. L. McMahon & C. L. McMahon, Inc., Tulsa	24,994.45	42,547.64
C. L. McMahon & C. L. McMahon, Inc., Tulsa	4,632.08	7,281.08
Carrie L. McClure,* McAlester	.....	6,596.37
H. G. McGee,* Pauls Valley	.....	2,614.82
W. C. McBride, Inc.,* St. Louis, Mo.	.....	27,961.43
McGinley-Sigler Co., Ft. Worth, Texas	8,103.34	5,429.22
I. R. McQueen, Oklahoma City	5,983.39	9,275.66
I. R. McQueen,* Oklahoma City	.....	2,543.40
W. F. McDaniel,* Blackwell	.....	2,798.12
F. W. Merrick, Inc., Ardmore	.....	23,302.76
Margay Oil Corp., Tulsa	104,640.85	153,585.96
J. H. Maxey,* Oklahoma City	.....	3,155.11
T. W. Medlin, Duncan	.....	9,267.63
Midland Pet. Corp.,* Wewoka	.....	4,430.94
Mid Continent Royalties, Inc.,* N. Y. City	.....	2,044.31
Mid Continent Pet. Corp., Tulsa	6,588.99	9,553.68
Mid Continent Pet. Corp., Tulsa	.....	†87,458.41
F. D. Misener, Tulsa	8,668.20	10,574.54
Mudge Oil Co., Pittsburgh, Pa.	19,135.41	14,443.09
E. C. Mullendore, Cleveland	.....	26,069.40
E. C. Mullendore, Cleveland	.....	4,011.79
Jennie Mullendore, Cleveland	.....	12,393.30
Alice Clark Myers,* Santa Fe, N. M.	.....	4,859.30
Major Oil Co.,* Okmulgee	.....	18,510.53
J. H. Markham, Jr., Tulsa	145,257.77	221,207.33
J. H. Markham, Jr.,* Tulsa	2,324.43	3,706.95
Dudley W. Moore, trustee,* Tulsa	.....	2,224.29

Name, Address—	Barrels	Amount
Clint Moore, est., Tulsa	.....	30,931.50
B. F. Melton,* Duncan	.....	4,160.69
Madden and Madden, Tulsa	34,152.12	48,738.97
Monarch Royalty Corp.,* Kansas City, Mo.	.....	53,079.25
Meridian Gas Co., Dallas Texas	.....	†18,069.64
Frank M. Miller, trustee for Warren Royalties, Inc.	88,471.86	12,954.25
Bluford Miller,* Okmulgee	.....	14,786.28
W. J. Metzger and J. R. Fultz	4,932.00	†7,043.93
Mary B. McAlester,* McAlester	.....	6,596.37
Marland Employees Royalty Co., Ponca	80,584.81	125,363.70
Marileen Oil & Gas, Blackwell	8,126.24	†12,722.38
Marton & Co., Tulsa	2,094.25	3,686.16
J. H. Markham, Jr., Tulsa	147,399.79	221,207.34
J. H. Markham, Jr.,* Tulsa	2,324.43	3,706.05
D. B. Mason, Tulsa	.....	14,047.77
A. J. Martin & F. T. Miller,* Okemah	.....	2,907.75
J. L. Martin,* Marlow	.....	2,244.41
M. F. Mainard, Jr.,* Wewoka	.....	2,169.27
Magee and Stipe, Electra, Texas	4,385.41	6,383.55
Marquette Oil Co., Tulsa	14,001.10	†32,765.90
McMan Oil and Gas, Tulsa	52,742.57	82,055.52
McMahon Royalties Co.,* San Antonio, Texas	2,889.11	†4,536.12
J. M. MacDonough,* New York City	.....	3,195.61
Alice McNamara,* Seminole	.....	2,241.02
L. J. McNamara,* Seminole	.....	3,724.44
W. A. McDougal,* Sapulpa	.....	2,110.98
Chas. McCully,* Hennessy	.....	2,208.82
Lesh & McCall, et al, Nacona, Texas	21,137.41	16,064.43
Nellie McGee,* Asher	.....	2,721.36
R. L. McGee,* Asher	.....	36,415.75
S. H. McKee,* Tonkawa	.....	6,468.42
J. N. McGee,* Tecumseh	.....	2,725.03
R. M. McMahan, Trustee, Tulsa	4,602.50	†8,036.98
Million and Thomas,* McAlester	.....	4,663.37
H. E. Morris,* Ada	1,881.51	2,192.64
J. Read Moore,* Wewoka	.....	8,721.43
Sy Moore,* Guthrie	.....	2,447.36
Minnehoma Oil Co., Tulsa	69,159.92	†115,575.42
E. R. Minshall, Tulsa	3,685.23	†5,733.88
Miller Bros. 101 Ranch, Trustee,* Ponca	.....	9,187.33
Meridian Gas Co., Dallas, Texas	.....	†18,069.64
F. W. Merrick and R. W. Coe, Trustee, Ardmore	11,549.03	14,000.22
R. J. Metcalf,* Ft. Worth, Texas	.....	3,049.24
W. J. Metzger and J. R. Fultz	7,093.76	13,005.39
J. F. Murphy, Sapulpa	.....	12,323.01
Sophia S. Mussellem,* Muskogee	3,548.04	5,988.20
Jodie McGee,* Norman	.....	5,453.95
Floyd McCaughtry,* Chickasha	.....	3,083.12
W. W. McDonough, Wewoka	.....	7,617.18
W. W. McDonough,* Wewoka	.....	4,680.43
J. M. MacDonough,* New York City	.....	3,195.61
McRoberts Royalty Co.*	.....	6,738.98
Beulah Neal,* Wanette	.....	2,707.95
North Central Texas Oil Co., Inc.,* N. Y. City	.....	7,730.74
National Oil and Dev. Co., Tulsa	8,088.04	9,581.74
New England Oil and Pipe Line Co., Boston, Mass.	86,273.96	124,249.03
Sam Naifeh and Chas. W. West, Sapulpa	17,628.25	21,751.45
Marjorie C. Nichols,* Chickasha	.....	2,237.02
Marjorie Nichols,* Chickasha	.....	3,330.41
G. A. Nichols,* Oklahoma City	.....	3,345.51
New York Pet. Royalty Corp.,* N. Y. City	11,700.40	18,380.52
National Ref. Co., Cleveland, Ohio	7,209.80	†13,167.17
National Union and Gas, Blackwell	3,983.25	9,556.94
R. L. Nelson,* Webb City	.....	5,686.03
Nester Oil Co.,* Alex	2,459.84	3,224.14
W. C. Norris, Tulsa	.....	11,962.70
R. B. North,* Blackwell	.....	2,252.59
Walter Neustadt, Ardmore	.....	5,370.57
F. M. Nelson, New York City	4,535.53	5,714.76
Hattie E. Noble,* Ardmore	.....	3,304.24
Eva E. Noble,* Ardmore	.....	4,405.67
Noble Oil and Gas, Tulsa	3,022.15	†4,375.05
A. S. Norvell,* Wewoka	.....	3,057.19
Ruby P. Norvell,* Wewoka	.....	2,410.98
Spencer Norvell,* Wewoka	.....	2,348.72
Norwood Oil Co., Tulsa	8,037.75	9,978.06
Ohio Fuel Supply Co., Columbus, Ohio	24,251.40	36,128.34
Ohio Fuel Oil Co.,* Charleston, West Va.	23,229.01	35,192.41
Oil State Pet. Co., Enid	5,164.54	9,344.49
Ohio State Pet. Co.,* Enid	6,313.47	9,727.52
Kitty L. Ogg,* Muskogee	2,142.84	4,412.19
Ogg Pet. Co., Muskogee	5,360.71	7,492.59
Oil and Gas Royalties, Inc.,* Toronto, Canada	.....	2,611.08
W. B. Osborn,* Ada	.....	5,452.93
W. B. Osborn, and Estate of Jim Fleet et al, Ada	.....	2,133.89
Orit Security Corp.,* New York City	.....	5,806.44
Ohio-Osage Oil Co., Hominy	.....	17,462.36
Okla. Natural Gas Corp., Tulsa	.....	†39,961.61
Okla. Public Service Corp., Okla. City	9,172.77	19,925.14
Okla. Gas Utilities Co., Chickasha	.....	54,374.83
Okla. Gulf Royalty Corp.,* Tulsa	.....	3,884.06
Okla. Royalty Co. of Canada,* Toronto Canada	.....	130,533.46
Okla. Power and Water Co., Sand Springs	.....	†16,546.70
Olean Petroleum Co., Bristow	4,383.50	†17,404.00
O'Rourke Oil Co., Bristow	.....	12,196.56

Name, Address—	Barrels	Amount
John P. Grieves, Terlton	.....	12,809.00
General Royalties Corp.,* Enid	.....	2,634.49
Walter H. Gant, N. B. Feagin and Knox L. Gargin,* Ardmore	.....	4,377.56
W. A. Graham Estate,* Clarion, Pa.	.....	3,771.75
Florence N. Graham, Trustee, Montebello, Calif	7,109.93	11,555.44
Ethel Glenny,* Blackwell	.....	3,344.47
V. L. Goltry, Trustee,* Enid	.....	3,462.80
B. C. Getzelman, *Algonquin, Ill.	.....	32,529.50
J. Wood Glass,* Nowata	4,655.12	5,939.67
Glass and Harmon, Nowata	9,802.36	13,164.65
Goldelline Oil Corp., Oklahoma City	9,847.90	13,377.07
Annie Gabogen & L. S. Youngblood,* Wewoka	.....	11,325.31
Glidden Oil Corp., Tulsa	7,078.54	10,129.32
Grimes and Gillespie, Tulsa	12,633.40	18,814.25
James H. Graham, Tulsa	6,227.55	9,092.21
Myrtle Green, et al,* Oklahoma City	.....	5,074.29
J. C. Greer,* Trustee for Louise Srother, Martinville, Va.	.....	2,212.69
Guaranty Trust Co.* New York City, N. Y.	.....	49,695.94
C. E. Gragg,* Paden	.....	2,323.41
C. E. Gragg, Paden	.....	11,595.91
W. E. Grisso,* Tulsa	.....	3,873.08
W. O. Graham,* Estate, Clarion, Pa.	.....	3,771.75
Florence N. Graham,* Tulsa	.....	16,925.44
Gardner Petr. Co., Tulsa	23,513.07	38,127.84
Gates Oil Co., Ardmore	9,781.02	10,865.00
C. O. Gregg, Ardmore	4,526.79	5,872.62
J. C. Gully,* Oklahoma City	.....	2,140.03
Gled Oil Co., Tulsa	17,426.78	28,733.30
Gorton Trust, Cement	8,923.87	11,532.56
S. D. Green,* Trustee, Maud	.....	2,695.29
R. F. Garland Co., Tulsa	19,003.08	†31,545.55
Max Garfinkel,* Long Beach, Cal.	.....	2,924.98
Grady County Oil Corp., Oklahoma City	.....	7,788.82
L. D. Gount,* Cushing	.....	2,604.56
Gray Oil Co., Tulsa	37,979.78	†53,497.69
F. H. Greer, Trustee,* Tulsa	.....	2,877.69
F. H. Greer, Trustee,* Tulsa	.....	3,781.50
Gypsy Oil Co., (suspense), Tulsa	4,342,644.29	†6,773,669.59
Gypsy Oil Co.,* Tulsa	1,952.59	2,530.87
Gypsy Oil Co., (suspense), Tulsa	.....	.....
Gypsy Oil Co., Tulsa	.....	.....
Gypsy Oil Co. on account of Partners, Tulsa	11,952.51	15,644.99
O. F. Graham and Crisella Graham,* Tulsa	2,748.95	2,158.18
Humble Oil & Ref., Houston, Texas	260,134.91	311,856.95
Hargrove Hudson,* Tulsa	.....	28,860.23
P. J. Hill,* Shawnee	.....	9,426.34
Dratha Harris,* Maud	.....	5,927.64
Carl B. Haun,* Blackwell	.....	3,285.91
G. W. Hearn (suspense) paid by Shell Petr.	.....	16,592.57
A. Harber, (suspense), Seminole	.....	4,159.50
Roy Harris,* Maud	.....	4,390.65
Hemlock Oil Co., Tulsa	25,467.53	29,794.31
Hefner Company,* Oklahoma City	.....	4,380.51
C. C. Harmon,* Nowata	.....	2,073.85
A. G. Hazlett, Okmulgee	.....	6,075.97
V. V. Harris,* Oklahoma City	.....	2,173.82
Highway Oil Refining Corp., Tulsa	105,235.87	161,164.08
Hall and Briscoe, Chicaksha	11,495.87	10,225.33
E. D. Atty for Thos Ryan,* Wetumka	.....	8,384.82
E. P. Harwell, Tr.,* Tulsa	.....	2,277.26
Bert Harris,* Maud	.....	2,581.69
Harris and Haun, Inc., Blackwell	.....	23,175.29
Henry and Karcher, Tulsa	167.94	†6,660.68
J. W. Henry, Altus	7,660.28	13,240.41
J. C. Hull,* Seminole	.....	4,900.74
Healdton Oil and Gas,* Enid	3,249.51	5,347.26
Healdton Oil and Gas, Enid	15,689.57	28,019.71
John F. Hayden, Tulsa	4,130.18	5,834.78
Max Hesslem,* New York City, N. Y.	.....	6,783.25
Harold Petr. Co., Blackwell	.....	17,929.15
J. P. Hammons,* Shawnee	.....	33,044.40
Harris-Hays Co.,* Okmulgee	9,956.12	15,685.96
O. R. Howard, Tulsa	214,501.48	327,255.56
E. N. Horton,* Ardmore	.....	2,413.11
Hilltip Investment Co.,* St. Louis, Mo.	.....	10,542.82
W. A. Hayner,* Shreveport, La.	.....	6,429.65
Henderson Oil Co., Marietta, Ohio	6,908.17	8,244.97
T. J. Hughes, Cushing	.....	7,591.30
Enoch M. Harris, Berwyn	.....	3,110.30
Harris Hays Co.,* Okmulgee	9,956.12	15,685.96
A. L. Harris,* Shawnee	.....	4,244.54
E. L. Harris, Trustee,* Wewoka	11,019.34	16,733.57
E. L. Harris, Trustee,* Wewoka	7,321.55	10,732.52
Hayner Royalty Corp.,* Tulsa	.....	3,907.49
Hambro Oil Co., St. Louis Mo.	4,772.31	6,013.11
Edwin Hanson,* Duncan	.....	2,782.51
W. T. Hales,* Oklahoma City,	2,052.70	†2,859.47
W. T. Hales, Oklahoma City	53,754.77	†67,553.52
E. F. Hall,* Okemah	.....	2,050.13
Harland Oil Co., Walco, Texas	16,502.58	†21,820.23
J. C. Hartley,* Garber	.....	6,106.77
S. B. Hammons,* Seminole	.....	6,447.93
J. N. Harber,* Seminole	.....	4,101.71
Harber and Riddle, Inc.,* Seminole	.....	4,126.14
R. T. Harber,* Seminole	.....	1,501.28
Homaokla Oil Co., Oklahoma City	214,102.06	257,718.26
Homaokla Oil Co.,* Oklahoma City	11,223.90	12,773.81
Robt. A. Hubbard,* Walpole, New Hampshire	.....	8,420.09
C. B. Hyde,* Oklahoma City	.....	3,414.37
A. N. Hopkins,* Davenport	1,446.92	†2,996.09
Nora Hernstadt,* New York City, N. Y.	3,663.19	4,431.51
Ward Harreld,* Oklahoma City	.....	2,228.89
Halsell and Son Oil and Gas, Vinita	4,126.15	†5,959.04
Ewing Halsell,* Vinita	1,855.40	†2,737.09
Howard Petr. Corp., Tulsa	38,534.01	58,491.19
J. A. Hull Co., Tulsa	46,212.49	†75,237.68
A. D. Horton, Agent,* Hawarden, Iowa	5,975.47	6,788.53
U. C. Homesley,* Earlsboro	.....	2,607.77
J. H. Hershey, Trustee,* Wichita, Kansas	.....	2,055.09
Houston Oil Co. of Texas, Houston, Texas	18,616.68	†28,714.95
Home Stake Oil and Gas Co.,* Tulsa	.....	189,252.52
Home Stake Oil and Gas Co., Tulsa	.....	†9,616.42
Home Gas Co. of Cushing,* Cushing	2,130.57	3,279.27
Home Gas Co. of Cushing, Cushing	.....	20,202.30
A. G. Hudspeth,* Lexington	.....	10,924.24
W. E. Hightower,* Oklahoma City	2,209.32	3,284.00
Orville Hembree,* Maud	.....	3,697.36
J. S. Hayes,* Newkirk	.....	2,826.00
Elizabeth Crockett Hayes, Oklahoma City	.....	4,855.19
E. F. Hale,* Okemah	.....	2,050.13
Leonard D. Ingram,* Cleveland, Ohio	.....	2,179.29
H. L. Ingram,* Shawnee	.....	5,138.72
Ingram Royalty Co.,* Shawnee	.....	9,044.60
J. A. & Emily Ingram,* Shawnee	.....	39,266.94
Indian Terr. Illuminating Oil Co., Bartlesville	1,239,367.42	†2,123,424.85
Iron Mountain Oil Co., Tulsa	12,234.84	15,776.82
Imperial Royalties Co.,* Kansas City, Mo.	.....	157,681.97
Harold M. Iseman,* New York City, N. Y.	.....	3,607.98
O. M. Ireland, Sapulpa	5,032.26	†7,522.09
Imo Oil and Gas Co., Covington	.....	14,205.89
Indiana Oil and Gas Co., Tulsa	26,697.50	†40,243.63
Indian Royalty Co.,* Okmulgee	176,542.64	275,289.15
Ice Drilling Co., Tulsa	4,579.85	†7,187.92
Investors Royalty, Inc.,* Tulsa	106,034.70	163,081.65
Interocean Oil Co., Tulsa	63,344.48	90,771.10
Illinois Refg. Co., Stillwater	5,777.23	6,621.72
Independent Oil and Gas Co.,* Tulsa	2,650,411.79	†4,213,483.35
Florence Jenkins and Mayme Walker,* Tulsa	.....	9,562.43
P. J. Jenkins,* Okemah	.....	2,050.13
E. H. Jennings Bros. Co., Pittsburgh, Pa.	3,934.47	†5,481.10
R. G. Jennings,* Pittsburgh, Pa.	6,529.15	†10,799.50
Randolph P. Jennings,* Beverly Hills, Calif	.....	78,682.12
U. J. Joines,* Ardmore	.....	5,517.39
L. B. Jackson, Sapulpa	.....	19,564.80
Jackson and Wise, Sapulpa	.....	5,962.73
John B. Jameson,* Concord, N. H.	56,423.34	87,061.58
Josey Oil Co., Tulsa	169,300.93	284,372.88
Josey Oil Co., Tulsa	.....	†12,861.41
Junction Oil and Gas Co., Newkirk	.....	6,477.67
C. O. Johnson and Geo. C. Pendleton Receivers*, Durant	.....	7,407.93
B. F. & Mary Eva Johnson,* Seminole	.....	4,665.52
Johnson Oil and Refg. Co., Chicago, Ill.	4,268.56	6,045.10
Johnson D. Hill,* Tulsa	2,539.31	4,010.24
Willard Johnston,* Shawnee	.....	5,614.41
Robert L. Jones,* Bristow	2,201.18	†4,405.22
R. C. Jones and Co., Inc., Cushing	.....	16,454.77
J. Edw. Jones,* New York City, N. Y.	.....	10,275.29
F. H. Korff,* New York City, N. Y.	.....	8,330.41
W. J. Kenealy,* Elizabeth, N. J.,	.....	5,977.79
S. P. Kennedy, P., Bradford, Pa.,	1,833.26	2,475.45
J. T. King, Okmulgee	4,632.04	7,281.06
Kay Oil Co., Blackwell	27,355.83	44,292.87
Sarah Kirschner,* Muskogee	.....	3,430.28
Nettie Klein,* New York City, N. Y.	.....	33,317.91
Kingwood Oil Co.,* Okmulgee	2,020.83	4,512.35
King Royalty Co.,* Wichita Falls, Texas	6,396.25	8,522.42
W. B. Krebs,* Duncan	.....	5,198.53
F. H. Korff and Co., Inc.,* New York City N. Y.	.....	5,190.22
Mack Kanner,* New York City, N. Y.	.....	27,418.66
J. D. Kimmell,* Tulsa	.....	2,491.57
W. O. Kays,* Shawnee	.....	2,654.53
Kay County Gas Co., Ponca	.....	†43,410.87
Frank Knappenberger,* Seminole	.....	3,787.04
D. L. Knappenberger, Tulsa	4,175.29	5,979.02
Emma B. Kennedy, trustee,* Okemah	.....	10,618.34
L. H. Kershaw,* Muskogee	3,224.49	5,034.87
Keener Oil and Gas, Tulsa	44,145.08	†53,848.08
Keener Oil and Gas,* Tulsa	1,303.30	†1,962.81
Kewanee Oil and Gas, Titusville, Pa.	414,707.75	†705,208.78
L. Keck,* Nacona, Texas	.....	3,216.91
J. J. Klabzuba and Geo. R. Sutton,* Prague	.....	2,838.85
Sarah J. Knotts,* Stilwater	.....	6,455.92
Kreola Oil Co., Ardmore	11,391.05	7,166.19
Kisner Royalty Co.,* Garber	.....	2,494.26
Kicola-Colcord and Commerce, Ardmore	9,177.92	9,757.21
Kingwood Oil Co., Okmulgee	93,812.71	†155,306.21
King Royalty Co., Wichita Falls, Texas	6,396.25	8,522.42
C. C. Kimble,* Beggs	.....	6,381.17
Kirk Oil Co., Ardmore	5,691.31	†7,174.65
W. L. Kistler, Inc., Tulsa	4,094.35	8,038.54
Keyokla Oil Co.,* Oklahoma City	.....	3,355.17
Helen Walker King,* Orange, Calif.	.....	26,162.69
Helen Walker King, Gdn.,* Orange, Calif.	.....	8,048.61

Name, Address—	Barrels	Amount
Kinkwood Oil Co.,* Okmulgee	2,020.83	4,512.35
R. R. Kisner,* Enid	....	2,394.34
Minnie L. Kisner,* Enid	.....	2,394.34
Tom King, Okmulgee	.....	5,434.51
John L. Kirkland and Son, Tulsa	4,935.42	5,769.14
Chas. E. Knox, Enid	1,028.35	†2,165.92
Chas. E. Knok, Enid	5,061.37	†10,320.67
T. E. Laselle, Ada	13,109.14	18,453.60
C. K. Lambert et al, Okmulgee	9,446.58	15,227.16
R. W. Laughlin,* Wewoka	.....	13,527.52
John Lahman,* Altus	.....	5,456.36
Lawton Corporation, Oklahoma City	.....	6,643.18
C. H. Lebow, Tulsa	11,157.17	17,945.29
C. H. Lebow,* Tulsa	2,158.31	3,073.61
A. W. Lewis,* Harlan, Iowa	4,697.37	7,795.03
Lewis Production Co., Pittsburgh, Pa.	112,593.44	172,944.34
W. M. Longmore,* Oklahoma City	.....	5,072.76
LeFlore County Gas & Electric Co., Poteau	.....	11,113.95
Florence Lindley,* Sapulpa	.....	†9,788.56
E. L. Lindly, Alex	.....	5,722.10
Little Nick Oil Co., Chickasha	.....	25,719.67
Nites Linn,* Oklahoma City	.....	2,327.82
J. W. Linn,* Shawnee	.....	2,327.82
Ivan Linn,* Oklahoma City	.....	2,327.82
Liberty Royalties Corp.,* Tulsa	.....	18,081.29
Heirs of T. J. Little,* Wetumka	.....	2,050.13
W. T. & Lylus A. Laughlin,* Oklahoma City	.....	5,091.66
Little Fay Oil Co., & J. M. Gillette, Tulsa	.....	4,053.05
Little Fay Oil Co., Tulsa	10,185.56	9,701.70
Jos. C. Looney,* Wewoka	.....	4,640.84
Lima Oil and Gas Co., Bartlesville	.....	38,347.20
Laforce & Ferguson, Limon, Colo.	.....	5,253.97
I. B. Levy, trustee, Oklahoma City	3,005.17	5,031.81
D. B. Lack Co.,* Wewoka	.....	19,729.64
Matyse B. Lack and D. B. Lack,* Wewoka	.....	18,649.40
Link Oil Co., Tulsa	17,185.69	†24,999.36
Nancy J. Laughlin,* Cushing	.....	2,670.02
Large Oil Co., Bartlesville	3,897.19	5,660.80
Lone Eagle Oil and Gas, Duncan	4,379.44	6,391.81
C. K. Lambert and J. S. Spicer	9,446.58	15,227.16
Lewis Prod. Co., Pittsburgh, Pa.	112,593.44	172,944.34
W. S. & Amy Livingston,* Seminole	.....	6,605.30
Laurel Oil and Gas, Tulsa	98,458.62	†149,312.93
T. J. Little, Heirs,* Wetumka	.....	2,050.13
Patty Spence Ludey, Marietta, Ohio	4,784.59	5,925.42
Park B. Lamberton,* Tulsa	1,366.89	2,159.93
W. T. & Lyles A. Laughlin,* Oklahoma City	.....	5,091.66
Lone Star Gas Co., Dallas, Texas	10,261.22	†16,670.45
A. M. Landon, Independence, Kans.	.....	9,108.13
L. H. Love, Ardmore	2,620.60	†5,468.89
Lilami Oil Corp., Oklahoma City	13,772.26	16,219.04
Louisiana Oil Refg. Co., Shreveport, La.	110,440.62	113,815.99
Mid-Continent Petr. Corp., Tulsa	1,473,696.38	2,126,956.47
Mid-Continent Petr. Corp.,* Tulsa	.....	7,731.03
Mid-Continent Petr. Corp., Tulsa	.....	†514.30
(See other reports on following page)		
Midco Oil Corp., Tulsa	16,031.00	25,286.82
Malernee Oil Co., Oklahoma City	5,805.00	†8,937.66
Mid-Kansas Oil and Gas, Findlay, Ohio	464,274.96	†726,950.56
Marland Prod. Co., Ponca	384,765.35	†682,043.36
Magnolia Petr. Corp., Dallas, Texas	4,825,136.32	†7,239,282.81
Annie Meyer,* Sapulpa	.....	2,787.19
Mul-Berry Oil Co., Cushing	.....	64,663.03
Murphy Oil Co. of Pennsylvania, Philadelphia, Pa.	6,246.13	7,313.36
E. L. Mayes, Tulsa	.....	84,964.03
Clifford Mooers, trustee, Wichita Falls, Texas	4,656.04	6,208.77
Dudley O. Morgan, Tulsa	.....	24,369.49
Dudley O. Morgan, Tulsa	.....	2,504.41
McGraw Oil Co., Tulsa	20,668.52	27,853.97
C. L. McMahon and C. L. McMahon, Inc.,* Tulsa	8,312.16	13,832.46
C. L. McMahon & C. L. McMahon, Inc., Tulsa	24,994.45	42,547.64
C. L. McMahon & C. L. McMahon, Inc., Tulsa	4,632.08	7,281.08
Carrie L. McClure,* McAlester	.....	6,596.37
H. G. McGee,* Pauls Valley	.....	2,614.82
W. C. McBride, Inc.,* St. Louis, Mo.	.....	27,961.43
McGinley-Sigler Co., Ft. Worth, Texas	8,103.34	5,429.22
I. R. McQueen, Oklahoma City	5,983.39	9,275.66
I. R. McQueen,* Oklahoma City	.....	2,543.40
W. F. McDaniel,* Blackwell	.....	2,798.12
F. W. Merrick, Inc., Ardmore	.....	23,302.76
Margay Oil Corp., Tulsa	104,640.85	153,585.96
J. H. Maxey,* Oklahoma City	.....	3,155.11
T. W. Medlin, Duncan	.....	9,267.63
Midland Pet. Corp.,* Wewoka	.....	4,430.94
Mid Continent Royalties, Inc.,* N. Y. City	.....	2,044.31
Mid Continent Pet. Corp., Tulsa	6,588.99	9,553.68
Mid Continent Pet. Corp., Tulsa	.....	†87,458.41
F. D. Misener, Tulsa	8,668.20	10,574.54
Mudge Oil Co., Pittsburgh, Pa.	19,135.41	14,443.09
E. C. Mullendore, Cleveland	.....	26,069.40
E. C. Mullendore, Cleveland	.....	4,011.79
Jennie Mullendore, Cleveland	.....	12,393.30
Alice Clark Myers,* Santa Fe, N. M.	.....	4,859.30
Major Oil Co.,* Okmulgee	.....	18,510.53
J. H. Markham, Jr., Tulsa	145,257.77	221,207.33
J. H. Markham, Jr.,* Tulsa	2,324.43	3,706.05
Dudley W. Moore, trustee,* Tulsa	.....	2,224.29

Name, Address—	Barrels	Amount
Clint Moore, est., Tulsa	.....	30,931.50
B. F. Melton,* Duncan	.....	4,160.69
Madden and Madden, Tulsa	34,152.12	48,738.97
Monarch Royalty Corp.,* Kansas City, Mo.	.....	53,079.25
Meridian Gas Co., Dallas Texas	.....	†18,069.64
Frank M. Miller, trustee for Warren Royalties, Inc.	88,471.86	12,954.25
Bluford Miller,* Okmulgee	.....	14,786.28
W. J. Metzger and J. R. Fultz	4,932.00	†7,043.93
Mary B. McAlester,* McAlester	.....	6,596.37
Marland Employees Royalty Co., Ponca	80,584.81	125,363.70
Marileen Oil & Gas, Blackwell	8,126.24	†12,722.38
Marton & Co., Tulsa	2,094.25	3,686.16
J. H. Markham, Jr., Tulsa	147,399.79	221,207.34
J. H. Markham, Jr.,* Tulsa	2,324.43	3,706.05
D. B. Mason, Tulsa	.....	14,047.77
A. J. Martin & F. T. Miller,* Okemah	.....	2,907.75
J. L. Martin,* Marlow	.....	2,244.41
M. F. Mainard, Jr.,* Wewoka	.....	2,169.27
Magee and Stipe, Electra, Texas	4,385.41	6,383.55
Marquette Oil Co., Tulsa	14,001.10	†32,765.90
McMan Oil and Gas, Tulsa	52,742.57	82,055.52
McMahon Royalties Co.,* San Antonio, Texas	2,889.11	†4,536.12
J. M. MacDonough,* New York City	.....	3,195.61
Alice McNamara,* Seminole	.....	2,241.02
L. J. McNamara,* Seminole	.....	3,724.44
W. A. McDougal,* Sapulpa	.....	2,110.98
Chas. McCully,* Hennessy	.....	2,208.82
Lesh & McCall, et al, Nacona, Texas	21,137.41	16,064.43
Nellie McGee,* Asher	.....	2,721.36
R. L. McGee,* Asher	.....	36,415.75
S. H. McKee,* Tonkawa	.....	6,468.42
J. N. McGee,* Tecumseh	.....	2,725.03
R. M. McMahan, Trustee, Tulsa	4,602.50	†8,036.98
Million and Thomas,* McAlester	.....	4,663.37
H. E. Morris,* Ada	1,881.51	2,192.64
J. Read Moore,* Wewoka	.....	8,721.43
Sy Moore,* Guthrie	.....	2,447.36
Minnehoma Oil Co., Tulsa	69,159.92	†115,575.42
E. R. Minshall, Tulsa	3,685.23	†5,733.88
Miller Bros. 101 Ranch, Trustee,* Ponca	.....	9,187.33
Meridian Gas Co., Dallas, Texas	.....	†18,069.64
F. W. Merrick and R. W. Coe, Trustee, Ardmore	11,549.03	14,000.22
R. J. Metcalf,* Ft. Worth, Texas	.....	3,049.24
W. J. Metzger and J. R. Fultz	7,093.76	13,005.39
J. F. Murphy, Sapulpa	.....	12,323.01
Sophia S. Mussellem,* Muskogee	3,548.04	5,988.20
Jodie McGee,* Norman	.....	5,453.95
Floyd McCaughtry,* Chickasha	.....	3,083.12
W. W. McDonough, Wewoka	.....	7,617.18
W. W. McDonough,* Wewoka	.....	4,680.43
J. M. MacDonough,* New York City	.....	3,195.61
McRoberts Royalty Co.*	.....	6,738.98
Beulah Neal,* Wanette	.....	2,707.95
North Central Texas Oil Co., Inc.,* N. Y. City	.....	7,730.74
National Oil and Dev. Co., Tulsa	8,088.04	9,581.74
New England Oil and Pipe Line Co., Boston, Mass.	86,273.96	124,249.03
Sam Naifeh and Chas. W. West, Sapulpa	17,628.25	21,751.45
Marjorie C. Nichols,* Chickasha	.....	2,237.02
Marjorie Nichols,* Chickasha	.....	3,330.41
G. A. Nichols,* Oklahoma City	.....	3,345.51
New York Pet. Royalty Corp.,* N. Y. City	11,700.40	18,380.52
National Ref. Co., Cleveland, Ohio	7,209.80	†13,167.17
National Union and Gas, Blackwell	3,983.25	9,556.94
R. L. Nelson,* Webb City	.....	5,686.03
Nester Oil Co.,* Alex	2,459.84	3,224.14
W. C. Norris, Tulsa	.....	11,962.70
R. B. North,* Blackwell	.....	2,252.59
Walter Neustadt, Ardmore	.....	5,370.57
F. M. Nelson, New York City	4,535.53	5,714.76
Hattie E. Noble,* Ardmore	.....	3,304.24
Eva E. Noble,* Ardmore	.....	4,405.67
Noble Oil and Gas, Tulsa	3,022.15	†4,375.05
A. S. Norvell,* Wewoka	.....	3,057.19
Ruby P. Norvell,* Wewoka	.....	2,410.98
Spencer Norvell,* Wewoka	.....	2,348.72
Norwood Oil Co., Tulsa	8,037.75	9,978.06
Ohio Fuel Supply Co., Columbus, Ohio	24,251.40	36,128.34
Ohio Fuel Oil Co.,* Charleston, West Va.	23,229.01	35,192.41
Oil State Pet. Co., Enid	5,164.54	9,344.49
Ohio State Pet. Co.,* Enid	6,313.47	9,727.52
Kitty L. Ogg,* Muskogee	2,142.84	4,412.19
Ogg Pet. Co., Muskogee	5,360.71	7,492.59
Oil and Gas Royalties, Inc.,* Toronto, Canada	.....	2,611.08
W. B. Osborn,* Ada	.....	5,452.93
W. B. Osborn, and Estate of Jim Fleet et al, Ada	.....	2,133.89
Orit Security Corp.,* New York City	.....	5,806.44
Ohio-Osage Oil Co., Hominy	.....	17,462.36
Okla. Natural Gas Corp., Tulsa	.....	†39,961.61
Okla. Public Service Corp., Okla. City	9,172.77	19,925.14
Okla. Gas Utilities Co., Chickasha	.....	54,374.83
Okla. Gulf Royalty Corp.,* Tulsa	.....	3,884.06
Okla. Royalty Co. of Canada,* Toronto Canada	.....	130,533.46
Okla. Power and Water Co., Sand Springs	.....	†16,546.70
Olean Petroleum Co., Bristow	4,383.50	†17,404.00
O'Rourke Oil Co., Bristow	.....	12,196.56

Name, Address—	Barrels	Amount
Osage Development Co., Bartlesville	4,348.99	5,381.78
Osage Gas Prod. Co., Independence, Kansas.	368.14	†53,344.07
Ozark Oil Co.,* Tulsa	.....	6,637.79
Mrs. Ollie B. O'Dell,* Richmond, Calif.	.....	12,089.31
Ona Oil Co., Blackwell	.....	50,295.79
S. S. Orwig, Wewoka	.....	37,500.62
S. S. Orwig, Wewoka	.....	32,644.00
M. S. Owen,* Cushing	.....	9,699.51
Provident Royalty Co.,* Tulsa	.....	3,509.71
Provident Royalty Co.,* Tulsa	25,098.41	38,989.70
S. T. Palmer,* Okemah	.....	7,684.04
Privett Drilling Co., Maramec	2,710.87	8,515.10
B. G. Patton,* Okmulgee	2,721.33	4,297.40
F. F. Priboth,* Blackwell	2,035.81	3,515.78
Lillie M. Priboth,* Blackwell	2,036.37	3,551.95
Geo. L. Pace and Keystone Prod. Co., Wichita Falls, Texas	34,010.19	50,494.85
Producers & Refiners Corp., Independence, Kas.	152,533.25	153,775.13
Producers & Refiners Corp., Independence, Kas.	.....	†15,357.09
Pepper Oil and Gas,* Okla.	.....	21,315.09
Peerless Oil and Gas,* Indiana, Pa.	11,823.15	19,914.12
Petroleum Rights Corp.,* New York City	.....	11,225.99
Pierce Petroleum Corp., Sand Springs	16,515.50	†24,290.88
W. B. Pine, Okmulgee	119,040.83	†183,977.70
W. B. Pine and Phillips Pet. Co., Okmulgee	27,326.32	43,502.06
Producers Oil Co., Tulsa	19,351.62	29,783.49
Petroleum Co. & M. H. Mosier,* Tulsa	9,938.13	†13,950.70
Petroleum Co., Tulsa	4,723.23	†6,685.50
Petroleum Royalties Co.,* Tulsa	.....	135,666.69
Pure Oil Co., Chicago, Ill.	1,915,529.07	†3,103,192.86
Pawnee Oil Producing Co., Tulsa	4,315.27	6,295.59
Paragon Oil Co., Tulsa	5,197.25	†8,197.28
Panther Oil Co., Okla. City	5,114.88	20,932.78
Papoose Oil Co., Tulsa	4,221.00	†7,764.27
Papoose Oil Co., Tulsa	29,125.06	†51,019.53
E. N. Panner,* Shawnee	.....	3,697.01
John Panos, Wewoka	.....	11,201.35
John Panos,* Wewoka	.....	2,993.40
Chas. Page, Trustee, Tulsa	3,579.01	5,589.75
Grace Payne,* Okmulgee	.....	3,857.74
Paraffine Oil Co., Houston Texas	8,540.46	10,594.47
Pioneer Trust Co.,* Kansas City, Mo.	.....	2,359.27
Plains Pet. Co., Tulsa	12,597.25	†19,830.01
M. F. Powers,* Tulsa	8,209.00	12,540.76
Waite Phillips,* Tulsa	2,276.85	3,716.13
W. W. Pryor,* Holdenville	1,230.95	2,610.21
N. J. and Alpha Price,* Okemah	.....	5,046.68
O. J. Pharoah,* Henryetta	.....	11,343.37
Plymouth Pet. Co., Tulsa	9,616.89	13,032.98
M. W. Pugh, Marlow	5,853.47	7,673.73
Pyramid Oil Co., Winchester, Ky.	6,109.95	7,384.33
J. E. Perkins,* Kansas City, Mo.	.....	2,650.64
Pennok Oil Co., Tulsa	32,085.59	†56,339.98
Perkins and Cullum, Wichita Falls, Texas	8,556.34	11,599.43
Perpetual Royalty Income Co.,* Rock Island, Ill.	1,079.32	2,392.61
Perpetual Royalty Corp.,* St. Louis, Mo.	.....	16,745.05
Prairie Oil and Gas Co., Independence, Kans.	3,852,645.36	†6,203,417.86
Petroleum Producers Co., Wichita Falls	16,952.52	25,478.08
Phoenix Oil Co., Pittsburgh, Pa.	12,500.14	19,579.77
J. A. Patterson,* Wewoka	.....	4,570.24
Pauline Oil and Gas, Oklahoma City	7,528.58	10,792.97
Pawhuska Oil and Gas, Pawhuska	.....	†7,565.38
Chas. Pfile,* Oklahoma City	.....	2,037.96
Pioneer Pet. Co., Tulsa	12,635.94	15,251.24
W. D. Priddy,* Norman	.....	4,821.24
G. K. Powell,* Muskogee	.....	2,188.60
Geo. C. Probst,* Tulsa	.....	19,443.89
W. G. Phillips & J. B. Milam, Chelsea	28,448.96	†36,043.22
Phillips Pet. Co., Bartlesville	850,500.48	1,349,203.74
C. P. Quinlan,* Tulsa	13,088.62	†18,764.50
John Quimby,* Montebello, Calif.	4,504.34	7,370.20
Quinton Relief Oil and Gas, Quinton	.....	†21,497.18
Quinton Spelter Co., Quinton	.....	†29,745.12
John W. Rainey,* Shawnee	.....	32,138.46
Ray Oil Co.,* Alex	1,902.77	2,536.69
Red Bank Oil Co., Tulsa	8,811.94	12,211.97
Reed and Marmon, Nowata	.....	7,621.99
U. T. Rexroat, Gdn.,* Ardmore	.....	5,977.56
Reserve Pet. Co., Tulsa	30,072.55	44,468.91
Relliance Oil Co. of Okla., Houston, Texas	4,362.71	8,798.16
Reiter-Foster Oil Corp.,* Tulsa	256,233.34	412,033.96
Edwin I. Reeser, Inc.,* Tulsa	.....	6,571.95
Isabella S. Reed,* Neosho, Mo.	18,257.78	31,491.47
Frank H. Reed,* Neosho, Mo.	.....	35,401.64
Frank H. & Isabella Reed,* Neosho, Mo.	51,985.39	78,505.56
Regal Oil & Gas Co., Tulsa	12,717.36	†16,147.72
Rex Oil and Gas Co., Winchester, Ky.	6,109.95	7,384.33
Reynolds Oil and Royalty Co.,* Okmulgee	13,106.18	20,439.68
Rockland Oil Co., Ardmore	29,432.59	32,223.57
Calloway Rogers,* Earlsboro	.....	5,973.22
Calloway Rogers and Rosa Rogers,* Earlsboro	.....	40,309.41
Ransom Pool, Anthony, N. M.	3,832.23	5,789.23
Replogle & Johnston,' Oklahoma City	.....	5,397.21
Zelta Richardson,* Tecumseh	.....	2,648.25
Thos. C. Roberts, Ardmore	4,108.77	6,172.66
J. S. Routt, Okmulgee	3,270.43	5,141.49
L. O. Regan,* Tecumseh	.....	3,977.92
J. W. Robins, Ft. Worth, Texas	10,561.05	10,503.90
Riverside Oil and Ref. Co., Tulsa	14,885.73	22,466.77
Riverland Co.,* Tulsa	17,189.70	†26,369.99
Royalty Investment Synd.,* New York City	.....	2,972.27
B. P. Rudell,* Konawa	.....	14,947.40
Dora C. Russell,* Duncan	.....	2,782.67
Ryan Consolidated Pet. Corp., Tulsa	6,059.97	8,891.30
E. L. Robinson,* Tulsa	6,794.56	10,208.40
E. L. Robinson and Gibson Zahniser Oil Corp., Tulsa	5,404.59	†10,460.85
C. L. Richards,* Tulsa	.....	7,247.33
L. D. Rickey, Ardmore	2,132.13	2,563.90
Leslie Rogers,* Tulsa	6,349.17	†10,421.40
M. L. Rascoe,* Burlingame, Calif.	.....	58,108.07
Jake Rutz Oil Co., Morris	.....	8,644.22
W. R. & W. E. Ramsey, Oklahoma City	.....	170,932.03
Scott Rouse,* Marshall	.....	7,512.00
Horace Roberts,* Morrestown, N. J.	.....	2,422.22
Royalty Corp. of America,* Tulsa	86,973.66	133,983.46
Judie Rentie,' care Texas Co.	.....	7,657.52
D. Replogle,* Oklahoma City	.....	4,215.01
Jamie Replogle,* Oklahoma City	.....	6,420.93
D. H. Radcliffe,* Los Angeles, Calif.	1,200.95	2,113.45
John H. Rebold Oil Co., Okmulgee	.....	13,366.69
Philo C. Robinson,* Gdn., Los Angeles	.....	8,119.70
B. H. Robertson, Nowata	3,819.88	5,185.56
W. A. Rookstool,* Norman	.....	3,551.59
Rubana Oil Co., Winfield, Kansas	.....	†8,982.66
Geo. Ross,* Marshall	.....	2,028.06
W. S. Randall, Oklahoma City	5,952.65	5,136.78
B. B. Ralph,* Kansas City, Mo.	.....	5,033.88
J. & B. Reis,* New York City	.....	4,120.63
J. A. Rockwell,* Warren, Pa.	4,852.07	8,066.10
Rena Royalty Co.,* Tulsa	4,424.92	23,100.84
Silurian Oil Co., St. Louis, Mo.	104,524.34	144,441.89
Southwest Producing Co., Bristow	.....	†15,989.68
W. H. Sammon,* Maud	.....	27,521.80
J. C. Greer, Trustee for Louise Strother, Martinville, Va.	.....	2,212.69
Skelly Oil Co.,* Tulsa	932,517.16	†1,403,871.80
Selby Oil and Gas Co., Tulsa	30,894.49	†44,288.56
Dave Schonwald and Junia*, Blackwell	.....	3,660.15
A. F. Shaw,* Shamrock	.....	2,872.53
B. J. Shaw,* Wichita Falls, Texas	1,526.21	2,376.83
Robt. C. Sharp, Tulsa	5,415.02	8,159.11
Est. C. R. Smith, Ardmore	4,245.77	†8,633.85
Chas. R. Smith, Jr., Ardmore	7,463.76	†13,871.66
Marie S. Smith, Ardmore	9,151.78	†17,660.18
Terry G. Smith,* San Diego, Calif.	.....	3,036.06
N. Bert Smith,* Oklahoma City	.....	8,360.78
L. G. Stanley, Pawhuska	.....	6,632.07
Harriet W. Sparks,* Shawnee	7,380.07	11,458.76
Sands Pet. Co., Tulsa	35,885.47	51,941.99
Fred and Willard Sowards,* Stroud	.....	2,524.63
Geo. W. Snedden, Tulsa	10,171.33	15,249.72
Gracie I. Shirley,* Tulsa	.....	2,903.59
James A. Swindle, Muskogee	7,164.78	11,621.42
T. J. & Alice Spencer,* Wewoka	.....	8,123.85
R. J. St. Germain,* Tulsa	.....	3,690.18
Marie A. Sharum,* Ripley	.....	13,082.06
Shertzer Bros., Dewey	4,949.37	5,467.14
Shareline Oil and Gas, Tulsa	9,595.35	14,060.14
O. W. Seay,* Ryan	.....	9,960.82
Sterling Oil & Gas Co., Abilene, Texas	10,928.69	14,354.75
San Bois Gas Co., Quinton	.....	†13,579.27
Savoy Oil Co., Tulsa	8,362.92	†10,234.77
Sarasota Oil Co.,* Ardmore	3,802.97	4,162.27
Geo. W. Scott,* Agra	.....	7,339.12
Harry E. Schmidt,* Columbus, Ohio	6,309.54	10,904.41
Schermerhorn Oil Co., Tulsa	3,975.78	†64,042.77
J. B. Schermerhorn, Inc., Minneapolis, Minn.	67,549.96	84,895.36
J. B. Schermerhorn,* Inc., Minneapolis, Minn.	3,037.42	3,974.02
Schermerhorn Young Co., Minneapolis, Minn.	1,530.56	2,185.18
Schermerhorn Ardmore Co., Minneapolis, Minn.	121,045.50	†107,469.56
Schermerhorn Oil Co., Tulsa	.....	23,851.57
Morris Schonwald,* Oklahoma City	.....	2,395.77
Earl Smith,* Blackwell	.....	3,344.47
Steve Smith,* Blackwell	.....	3,344.47
E. L. Smith Oil Co., Inc., Mexia, Texas	4,924.64	7,350.84
Leona Smith,* Blackwell	.....	3,344.47
Mabel Smith,* Celina, Texas	.....	2,460.37
Snodgrass Oil Co., Frederick	.....	8,721.96
Pearl M. Snowden,* Philadelphia, Pa.	.....	15,114.07
Sneed Royalty Co.,* Tulsa	17,322.27	24,936.05
Seneca Royalties Co.,* Oklahoma City	.....	6,846.30
Sturm Drilling Co., Ardmore	16,636.01	21,581.66
Leigh J. Sessions Corp.,* New York City	.....	4,589.34
San Bois Gas Co., Quinton	.....	†26,572.66
Sims Oil Co., Dallas, Texas	12,181.15	†19,111.32
Clyde and W. D. Seay,* Oscar	1,838.00	2,381.08
Harriet W. Sparks,* Earlsboro	.....	5,721.51
John H. Standridge,* Lexington	.....	2,149.47
Southland Royalty Co.,* Ponca	3,747.55	9,004.86
Laura Sherman,* Tecumseh	.....	2,874.69
J. D. Shepherd,* Shawnee	.....	3,780.85
W. F. Shepherd,* Shawnee	.....	3,341.20
Dan Shepherd, Gdn., Shawnee	.....	16,037.44
P. A. Shaner, Ardmore	5,809.56	10,459.29
C. E. Sykes,* Ardmore	.....	2,969.91
O. B. Surber,* Chickasha	.....	2,506.14

Name, Address—	Barrels	Amount
Frederick O. Spedden,* Tuxedo Park, N. Y.	.....	2,719.73
F. P. Swan,* Konawa	.....	17,042.17
E. D. Slough,* Ardmore	.....	2,775.72
Ira Shimp,* Blackwell	.....	10,724.56
Sampson Oil Co., Tulsa	.....	6,494.54
Sidwell Drilling Co., Sapulpa	3,755.86	5,748.12
J. R. Simpson, Agt., Est. of O. D. Strothers,* Tulsa	.....	10,192.51
Susan A. Simpson,* Tulsa	.....	2,252.64
Earl Spring,* Ryan	.....	5,849.13
Sheridan Oil Co., Tulsa	15,781.51	†22,391.01
C. B. Shaffer, Chicago, Ill.	43,268.73	49,359.77
Estate of L. S. Skelton, Okmulgee	1,381.33	6,395.80
L. L. Sturgeon,* Wewoka	.....	5,995.88
Phil N. Stuart,* Shawnee	.....	4,238.33
Sure Oil Corp., Tulsa	3,952.97	5,419.06
Snowden & McSweeney Co., N. Y. City	128,709.86	†193,099.71
Sinclair Oil and Gas, Tulsa	3,575,572.87	5,539,683.48
Sinclair Oil and Gas, Tulsa	.....	†183,244.04
H. F. Sinclair* New York City	.....	10,364.99
G. J. Smith, Tulsa	.....	12,973.34
J. A. Smith,* Paid by Shell Pet.	.....	2,912.05
Sunray Oil Co.,* Tulsa	17,727.19	24,281.63
Skelton Moore Oil Co., Bartlesville	5,586.12	7,279.72
Arlie & Alice Strough,* Davenport	.....	3,043.05
L. O. Sparks et al,* Oklahoma City	.....	26,773.11
Mrs. Lucy B. Scott,* Holdenville	.....	2,310.49
J. K. D. Shaffer,* Oklahoma City	2,014.95	†3,397.99
Mrs. Bettie Simmon,* Oklahoma City	.....	2,177.49
T. B. Slick, Oklahoma City	555,962.96	944,241.26
Tom Slick, Inc., Oklahoma City	1,912,763.57	†3,128,720.09
T. B. Slick,* Clarion, Pa.	53,907.14	88,250.05
Alwina Schaefer,* Marshall	.....	2,264.93
Shell Pet. Corp., St. Louis	1,378,773.45	†2,175,101.85
O. S. Sparks,* Ardmore	1,887.00	2,439.64
Silurian Oil Co., St. Louis	.....	†7,215.93
G. A. Simons, Okmulgee	.....	10,737.20
J. D. Simons, Tulsa	.....	6,287.82
Simms Oil Co., Dallas, Texas	12,181.15	†19,111.32
W. E. Simpson,* St. Louis, Mo.	3,248.54	†4,915.63
A. O. Simpson, Ardmore	3,248.54	†4,915.63
Simpson-Fell Oil Co., Ardmore	34,979.16	41,022.20
Edwin Sanford,* Oklahoma City	.....	2,357.50
Shaffer Oil & Ref. Co., Tulsa	492,115.46	822,204.73
Sun Royalty Co.,* Tulsa	23,714.44	36,300.19
Superior Oil Co., Tulsa	290,718.63	†462,543.98
C. H. Schoenfeld and J. H. Markham, Jr., Tulsa	2,269.98	3,277.72
Transcontinental Oil Co., Tulsa	106,120.56	†162,657.12
Twin State Oil Co.,*	392,559.06	485,909.71
Vida M. Tull,* Yale	.....	17,597.07
Martha Nadine Tully,* (now Andrews) Muskogee	.....	2,035.20
T. F. Tally,* Sulphur	.....	7,065.38
Ella Treadway,* Bowlegs	.....	3,132.07
T. A. Thurmond, Ardmore	2,620.60	†5,468.99
A. W. Tawes,* Crisfield, Md.	.....	7,913.99
Dr. J. C. Taylor, New York City	.....	8,037.53
Hazel B. Thomas,* Norge	.....	2,215.38
M. E. Templeton,* Phoenix, Ariz.	.....	20,950.57
J. Elmer Thomas,* Ft. Worth, Texas	.....	6,209.60
Texas Company, Tulsa	1,449,662.00	†2,204,575.58
H. H. Taylor, Tulsa	.....	166,045.03
A. H. Taylor,* Tulsa	.....	4,295.44
Maud Tinkle,* Sulphur	.....	2,732.92
Rufus S. Thomas and Mary,* Purcell	.....	10,924.24
S. F. Thompson,* Okemah	.....	4,436.04
Thompson Oil and Gas, Tulsa	3,790.24	†5,316.57
David P. Thornton,* Muskogee	[illegible]	2,358.51
Thlocco Oil Co., Tulsa	11,248.04	18,084.38
Tidal Oil Co.*	.....	1,067.66
Tidal Oil Co., Tulsa	18,886.73	†85,400.22
Tiger Mountain Oil Co., Tulsa	4,864.20	6,511.01
John E. Turner et al,* Holdenville	.....	2,749.81
Turman Oil Co., Tulsa	4,493.14	5,940.55
Texas Pacific Coal and Oil Co., Thurber, Tex.	43,318.90	†35,111.14
D. C. Teter,* Duncan	.....	3,195.20
Turman Oil Co., Tulsa	132,143.53	†226,845.57
Tidal Oil Co., by request of Cherokee Warren Oil and Gas Co., Tulsa	7,126.44	8,381.84
Tidal Osage Oil Co., Tulsa	426,782.93	†664,129.29
Gillia Umburn, Weleetka	.....	8,990.72
W. L. Umburn, Weleetka	.....	26,146.59
United Eight Oil Trust, Madill	.....	23,064.54
Virgie and Jos. Urbansky,* Oklahoma City	3,943.98	6,191.53
United Prod. Co., Inc.,* Charleston, W. Va.	1,684.48	2,757.79
C. F. Urschel, Oklahoma City	3,802.83	†7,239.41
Mrs. Floyd S. Urschel, Oklahoma City	3,802.83	†7,239.41
U. S. Royalties Corp.* New York City	18,449.04	†27,630.94
United Royalty Co.,* Newkirk	.....	3,155.02
Utilities Production Corp., Tulsa	.....	†5,133.02
Viersen Oil and Gas,* Okmulgee	29,952.61	44,551.75
Sam K. Viersen,* Okmulgee	6,343.84	9,684.45
S. E. Vance,* Tulsa	2,337.40	4,212.43
W. F. & Eliza Varnum,* Shawnee	....	14,692.13
Valley Osage Oil Co., Tulsa	19,077.11	24,011.86
C. P. VanGraafeiland,* St. Louis, Mo.	.....	7,478.77
Virland Oil and Gas, Tulsa	.....	4,171.77
Leon G. Voorhees,* Oklahoma City	18,039.45	23,688.54
Vick Royalty Co.,* Tulsa	.....	2,110.90
Vernon Oil and Gas, Blackwell	6,977.45	12,409.87
Amanda Vassar,* Tulsa	2,156.89	3,846.39
Vaughn and Rush, Dallas, Texas	48,641.00	119,003.03
P. E. Voyles, Pawhuska	.....	5,141.42
Ward Oil and Gas, Tulsa	9,663.66	12,723.62
Horna Wood,* Tulsa	2,170.20	3,173.79
Wood, Gilbert-Wood Synd. No. 1, Okla. City	.....	23,115.59
Wellsville Oil Co., Wellsville, N. Y.	10,046.71	12,850.86
Louise Windler,* Enid	.....	2,207.64
J. H. Wright, Sapulpa	14,020.17	20,835.44
H. F. Wilcox Oil and Gas,* Tulsa	217,829.86	307,169.18
Wolverine Pet. Corp., St. Louis	180,438.07	†246,194.09
Warren Royalties, Inc., By Frank M. Miller, Trustee	8,847.86	12,954.25
Warner Caldwell Oil Co., Titusville, Pa.	30,544.38	34,579.39
Winona Oil Co. of Delaware, Tulsa	40,333.78	63,730.67
Westheimer and Daube,* Ardmore	264,156.09	378,617.43
L. H. Wentz Oil Div., Ponca	154,105.74	†257,987.38
W. K. Work,* Wewoka	.....	6,529.75
E. P. Work,* Wewoka	.....	6,529.85
J. E. Wallace, Okmulgee	.....	8,973.96
C. C. Walker,* Okemah	.....	6,600.37
E. A. Walker,* Oklahoma City	.....	42,483.04
Westerly Oil Co., Bartlesville	5,080.36	†7,625.82
T. H. Wren,* Okemah	.....	2,050.13
Archie K. Wright,* Muskogee	.....	4,224.43
W. S. Wilcox,* Garber	.....	2,726.97
Western States Royalty Co.,* Great Falls, Mont.	2,883.29	4,501.22
Bert Weil,* New York City	.....	3,650.21
Morris Weil,* New York City	.....	2,755.72
Sophia Weber,* Marshall	.....	4,876.82
Carrie B. Welsh,* Blackwell	.....	2,954.58
J. L. Welsh,* Blackwell	.....	3.077.45
Margaret S. Weeks, Ardmore	7,463.76	†13,871.66
Wills and Smith, Ardmore	5,334.43	†7,767.00
John H. Winemiller Corp., Tulsa	3,947.12	5,330.26
E. W. Whitney,* Wewoka	.....	63,292.28
Warner Caldwell Oil Co., Titusville, Pa.	24,755.35	34,579.39
L. W. Wangerien,* Okmulgee	.....	2,238.52
C. W. Wangerien,* Okmulgee	.....	5,004.91
Washington Royalty Co.,* Bartlesville	11,506.02	17,768.25
E. A. Walker,* Oklahoma City	32,244.88	42,482.23
Waggoner Pet. Co., Ponca	2,931.66	†5,767.82
H. Z. Ward,* Heavener	.....	4,058.30
Wm. L. and Lula Wallace,* Shawnee	.....	2,786.35
S. A. Wilborn,* Sulphur	.....	2,464.38
Wittmer Oil and Gas Prop., Pittsburgh, Pa.	6,316.90	†10,926.14
W. E. Woods,* Cox City	.....	3,777.50
Wood Oil Co., Tulsa	.....	11,771.00
C. Dale Wolf,* Wewoka	.....	4,094.43
Flossie E. Wilcox,* Shawnee	.....	2,331.35
Bert Weil,* New York City	.....	3,650.21
Winkler & McQueen, Inc., Duncan	12,470.24	15,988.91
T. H. Wren,* Okemah	.....	2,050.13
Westland Oil Co., Tulsa	36,338.57	†55,514.00
C. W. Wolcott,* Gdn., Coweta	.....	2,972.22
White Eagle Oil & Ref., Wichita, Kansas	36,298.55	†54,253.86
Benton Wilson,* Greenfield, Mo.	.....	5,441.61
C. O. White,* Okemah	.....	2,088.87
James Wright,* Bristow	.....	4,234.00
L. F. & Pollie Whom,* Duncan	.....	2,242.10
John W. Wilmott,* San Diego, Cal.	.....	22,666.62
Wiser Oil Co., Sisterville, W. Va.	83,184.94	103,481.00
Wolverine Pet. Corp., St. Louis	.....	†17,884.47
Whitehill Oil Corp., Tulsa	13,226.52	17,023.05
Whitehill Oil Corp.* Tulsa	1,406.81	1,975.66
Watchorn Oil and Gas, Oklahoma City	15,823.21	20,886.64
B. F. Ward,* Wilson	5,079.33	6,426.99
Walsh Oil Co., Tulsa	6,295.47	7,904.34
Richard Weber,* Marshall	.....	2,265.01
Geo. Weber,* Marshall	.....	2,263.00
Wise and Jackson, Sapulpa	.....	5,962.73
Roy Wood,* Oklahoma City	.....	9,893.57
York Pet. Co. & I. Cromwell, Muskogee	3,032.96	5,830.25
L. W. Young,* Oklahoma City	.....	23,831.41
Harriett E. Youts,* Shawnee	.....	100,280.62
C. A. Youts,* Shawnee	.....	35,284.11
Joe Zanti,* Okmulgee	.....	2,962.94
Zola Oil Co., Tulsa	14,579.24	18,126.37
Effie M. Zollars,* Lincoln, Ill.	.....	2,249.75
L. W. Zimmerman, Chicago, Ill.	.....	30,047.23
Zollinger-Jarvix and Andrews,* Shawnee	.....	15,144.79

Highflex belt in service with Brown, Cady & Donnelly, Ft. Worth, Texas, still going strong after drilling 5 wells, total 18,285 ft. Sand storms frequent—grit has not affected Highflex. Federal belt clamps and Federal belt stretches used. Detailed report of drilling:

Well No.	Ft. Drilled	Size of Tools at Start	Size of Tools at Finish
1	3930	20"	6 5/8"
2	3260	20"	8 1/4"
3	4000	20"	6 5/8"
4	3820	20"	5 3/8"
5	3275	20"	8"

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GOODRICH Highflex belting makes possible new economies in power transmission in drilling and pumping service. Because of their unique construction, Highflex belts have been called "the greatest advance in belt construction in 30 years."

The Highflex Principle does away entirely with the old-type, folded-edge construction. Highflex belts have no folds. The square edges eliminate the binding action at the edge of old-type belts. There is nothing to interfere with the uniform free action of ply upon ply.

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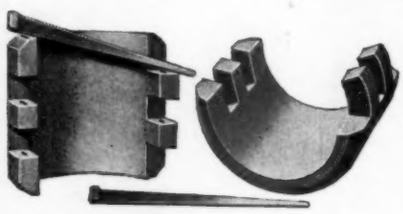

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COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

KANSAS

Company, Well and Location	Initial Production Bbls	Depth
BUTLER COUNTY—		
Empire, Hutchinson "C" 2, ne, 34-27-5e	125	2749
Empire, Kidwell 1, nw se nw, 8-29-5e	*	2900
CLOUD COUNTY—		
Concordia, Murdock 1, se, 6-6-4w	*	3670
COWLEY COUNTY—		
J. A. Hull Co., Kukuk 18, ne se ne 24-32-4e	200	3050
ELLIS COUNTY—		
Mid West Exp., Furthmeyer 36, se 25-12-16w	65	3105
GREENWOOD COUNTY—		
Independent, Sheppard 9, ne nw, 11-22-10e	200	2140
MARION COUNTY—		
Fred Franks, ne se nw, 25-19-3e, Schlott-hauer 1,	*	2770
MITCHELL COUNTY—		
Gurley et al, Abercrombie 1, c nw ne 32-9-7w	*	4108
MORRIS COUNTY—		
Mosely et al, Cessnum 1 (owdd) sw ne, 24-16-9e	*	1740
RUSSELL COUNTY—		
Keys Pet. Co. et al, Mermis 2, nw ne se, 32-13-15w	125	3333
SUMNER COUNTY—		
Washama Oil Co., Bussard "B" 2, cnl ne sw, 36-31-2e	150	2009
School et al, Highway 1, ne nw, 14-32-2e	*	2220

OKLAHOMA

Company, Well and Location	Initial Production Bbls.	Depth
CADDO COUNTY—		
Caddo Oil Co., McKenna 2, se sw sw, 4-5n-9w	10	2446
CANADIAN COUNTY—		
Wirt Franklin, & I.T.I.O., North 1, c ne ne, 18-13-10w	*	3702
CARTER COUNTY—		
Magnolia, Pollock 3, ne se se, 14-1s-3w	70	2367
Magnolia, Archer 1, se sw nw, 14-1s-3w	45	2565
Magnolia, Choess 3, se sw, 33-1s-3w	25	4148
CREEK COUNTY—		
Roxaline, Boling 2, c sw sw, 27-17-12e	¶3	1800
O. M. Irelan, Unallotted 5, cnw sw, 11-17-10e	10	1787
Twin State, Coachman 6, nw sw ne, 20-17-7e	200	2795
Bengal O.&G. Co., Tiger 9, sw se se sw, 17-17-7e	300	2747
Mid Continent, Stewart 28, ne nw se, 15-17-7e	415	2906
C. G. Tibbens, Jackson 5, se ne sw, 4-18-12e	20	2204
H. H. Taylor et al, Goat 1, sw nw se, 31-18-11e	¶7	2218
GARFIELD COUNTY—		
Marland, Garber 2, sw nw se, 19-23-3w	¶4	4880
GRADY COUNTY—		
M. B. Blake, Foster 1, c se nw, 23-5n-7w	¶2	2135
Meridian Gas Co., Glover 2, se nw ne, 27-5n-8w	¶6	2300
Champlin, Kerns 2, se sw sw, 13-4n-8w	*	3440
JEFFERSON COUNTY—		
P. W. Beck, Seay 1a, ne nw, 3-7s-5w	135	1146
Robberson & Wood, Seay 1, sw se ne, 36-6s-6w	*	2203
Bridwell Oil Co., Trout 1, cel ne ne, 33-6s-6w	*	2455
KAY COUNTY—		
C. A. Leonard et al, Smith 1, sw nw ne, 28-27-1e	¶600,000	855
Ingram & Wilson, School Land 1, c ne ne, 36-25-1w	*	845
KIOWA COUNTY—		
Russell & Sloan, Madden 1, ne sw sw, 32-6n-14w	*	952

SUMMARIZED REVIEW OF FIELD RESULTS

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Production This Week	Initial Production Last Week
Arkansas	4	6	1	3	1	..	2	3	506	559
California	27	25	27	24	..	..	..	1	39,600	50,825
Illinois	5	..	1	..	..	..	4	..	2	...
Kansas	12	6	6	1	..	1	6	4	865	25
Kentucky	11	39	10	17	..	3	1	19	214	904
Louisiana	14	13	3	4	7	1	4	8	150	935
Michigan	13	8	9	5	..	..	4	3	2,470	2,100
New York	7	7	7	7	..	..	..	..	14	27
Ohio	29	52	9	22	14	14	6	16	372	568
Oklahoma	60	62	33	36	12	2	15	24	22,870	15,742
Pennsylvania	59	46	51	43	7	2	1	1	136	197
Texas	138	133	85	66	4	16	49	51	25,407	45,767
West Virginia	22	10	5	1	14	9	3	..	43	5
Total	401	407	247	229	59	48	95	130	92,649	117,654
Increase this week	6	..	18	..	11	..	..	..	...	...
Decrease this week	..	..	..	..	..	..	35	..	25,005	...

OKLAHOMA (continued)

Company, Well and Location	Initial Production Bbls.	Depth
LOGAN COUNTY—		
Shell, Ross "B" 1, se, 19-19-4w	*	6195
MUSKOGEE COUNTY—		
C. O. Buckles, Barnett 4 (owdd) c ne se, 8-15-15e	15	1675
OKFUSKEE COUNTY—		
Atlantic Oil Prod. Co., Simmons 5, ne se se 11-10n-11e	60	2033
Fields 1, nw 13-10-11e	30	2080
OKMULGEE COUNTY—		
Starr Development, Scott 6, sw sw se ne, 15-13-14e	5	1403
C. V. Prince, Adams 7 (Twin) se sw ne, 12-14-14e	¶1½	1677
OSAGE COUNTY—		
L. G. Stanley, No. 5, nw sw se, 36-22-8e	150	470
Mid Kansas O.&G. Co., No. 4, ne se sw, 36-22-8e	195	476
Minnehoma Oil Co., No. 3, nw se, 11-26-8e	*	2552
PAWNEE COUNTY—		
Superior and Swift No. 1, cwl ne nw, 34-20-9e	¶150,000	2182
PONTOTOC COUNTY—		
Louisiana Oil Ref. Co., Perry 18, ne nw se, 19-5-8e	600	2676
Wilcox, Norris 1, se ne ne, 14-4n-7e	*	2190
POTTAWATOMIE COUNTY—		
Gypsy, Bourassa 3, sw se ne, 7-8-5e	¶48	4052
Texas, Calvin 1, ne se, 7-8-5e	120	4190
Texas, Calvin 3, nw ne se, 7-8-5e	365	4170
Magnolia, Billington 2, nw ne sw, 8-8-5e	590	4425
Pure, Wiley 4, nw sw nw, 8-8-5e	1985	4060
Wilcox, Smith 2, sw nw se, 8-8-5e	190	4158
Gypsy, Miller 3, se ne se, 18-8-5e	8470	....
	¶37	4030
Lawel O.&G. Co., Billington 1, se ne nw, 18-8-5e	995	4194
Skelly & Margay, Linger 1, sw nw ne, 18-8-5e	3700	4175
Tidal, Smith 2, se nw se, 26-7-4e	1705	3954
Magnolia, Cherry B 3, se sw ne, 26-7-4e	150	4190
Amerada, Ballard 1, se sw se, 1-8-4e	950	4153
Amerada, Hallum 3, sw se se, 1-8-4e	650	4156
Magnolia, Gassaway 1, se sw sw, 12-7-4e	*	4536
SEMINOLE COUNTY—		
Carter, Harjo 3, ne nw sw, 13-7-6e	325	4316
Roxana, Wolf 1, ne se se, 23-7-6e	¶20	3364
Sinclair, Taylor 1 (owdd) sw nw se, 10-8-6e	310	4115
Pure, Strothers "F" 7, se nw nw, 10-8-6e	25	4240
Skelly, Gross 2, se nw sw, 36-10-5e	*	....
W. B. Joyce, Haer 1, nw se, 31-10-5e	*	4648
Sinclair, Nakotche 2, ne sw sw, 18-5-8e	*	2718
SEQUOYAH COUNTY—		
Sequoyah Gas Co., Powell 2, c se nw, 33-11-25e	¶3	3240
STEPHENS COUNTY—		
Lone Eagle Oil Co., Simpson 8, sw ne ne se, 34-1s-8w	75	1845
TEXAS COUNTY—		
Three Way Oil Co., Price 1, se nw, 11-1n-18e cm	*	3504
WAGONER COUNTY—		
D. T. Marr et al, Hawkins 3, nw sw ne, 29-18-16e	*	865

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
ATHENS-ROSECRANS—		
Richfield Oil Co., Rosecrans 1,	450	6042
BELRIDGE—		
Berry Oil Co., No. 96	50	703
KERN FRONT—		
The Texas Co., Midlands 9, 14-28-27	200	2035
HUNTINGTON BEACH—		
Union Oil Co., Copeland 23	125	4201
California Western Oil Co., Transport-Baker	2700	6865
Cypress Pet. Co., Bay Hills 1 N.	1250	5890
Delaney Pet. Co., Irwin 2	1200	6677
Richfield Oil Co., Malcolm-Davis 4	150	7390
Shell Co., Binkley 4	100	7235
Nicholson 6	500	7500
Stakemiller 6	2000	7143
Bartholomae Oil Syn., No. 1	450	5375
RINCON—		
Chanslor-Canfield Midway Oil Co., Hobson B-6	325	4270
SANTA FE SPRINGS—		
Bandini Pet. Corp., Off 8	4100	5885
General Pet. Corp., E. G. B. 101 B.	5400	5890
Santa Fe 186-D	2400	5870
Santa Fe Com. 185-B	3800	5050
Richfield Oil Co., Industrial 1	3600	5888
Standard Oil Co., Walker 13	400	5835
The Texas Co., Matern 3-12	300	5778
Weaver 6-A	1800	4942
Union Oil Co., Alexander 11	1600	5855
Alexander 16	1300	5844
SEAL BEACH—		
Marland Oil Co., McGrath-Selover 15	800	6875
McGrath-Selover 20	1500	5420
Standard Oil Co., San Gabriel 2	1200	4960
VENTURA—		
Shell Oil Co., Taylor 23	1900	6403
TEXAS PRODUCTION		1u(R4v

TEXAS

TEXAS PANHANDLE

Company, Well and Location	Initial Production Bbls.	Depth
GRAY COUNTY—		
Magnolia Pet. Co., Raymond Harrah 3	100	3225
The Texas Co., H. M. Davis 5	75	3215
HUTCHINSON COUNTY—		
Phillips Pet. Co., Johnson-Pulaski 3	200	2886
WHEELER COUNTY—		
Lone Star Gas Co., T. Jones 3	¶51	1927
J. O. Whittington et al, Williams-Laycock 3	¶54	2050

CENTRAL WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
BROWN COUNTY—		
M. T. Anderson et al, Newton 1	*	1335
Corrita Oil Co., Low 1	*	600
Cranfill & Reynolds, Inc., Marr 1	*	1300
Cranfill-Reynolds & Bradstreet, Eubanks 5-B	30	1240
H. P. Evans et al, Tervooren 1	60	994
Gore & Brown, Mayes 3	15	650
Hammon & Garrett, Strange 1	*	1265
Herring & Anderson, Edmondson 1	*	1381
Holerman et al, McClannahan 1	*	557
Humble O. & R. Co., Hodnett 19-A	25	1190
Indian Pet. Co., Boysen 1	*	1735
W. L. Spence et al, Brown 1	*	615
The Texas Co., Byler 4	85	1320
CALLAHAN COUNTY—		
Bradstreet & Holden, Cavanaugh 1	†	620
Moutray Oil Co., Hatchett 14	30	366
Reiter-Foster Oil Corp., Hatchett 28	25	335
The Texas Co., Hatchett 21	25	356
COLEMAN COUNTY—		
Foster & Amsler, Haas 1	20	1499
Foster & Mid-Sun Oil Corp., Haas 2	20	1508
Fred Harris et al, Jones 1	*	1302
Magnolia Pet. Co., J. P. Morris 22	*	3600
Morrison-St. John & Simms, Young 1	*	2000
EASTLAND COUNTY—		
Arledge et al, Rich 1	*	1642
Northrup et al, Barker 1	*	1100
Panhandle Ref. Co., Wheeler 1	*	1204
Smith et al, Downtain 1	*	1825
ERATH COUNTY—		
Peters et al, Moring 1	¶12	3256
PALO PINTO COUNTY—		
Ashe Synd., Hart 1	*	4065
SHACKELFORD COUNTY—		
Earl & Dulls, Matthews 4	225	1156
Mid-Sun Oil Corp., Nail 3	*	1475
Roeser-Pendleton & Marland, Cook 35-A, (Sec. 61)	40	1277
Cook 8-A, (Sec. 83)	50	1407
Cook 1-A, (Sec. 88)	*	1620
Tannehill Oil Co., Matthews 5, (Sec. 27)	100	1175

WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
HOWARD COUNTY—		
Cosden & Co., Inc., Roberts 2-C	150	1316
Moody (Superior) Corp., Roberts 4-B	1040	2968
Roberts 9-E	1065	2991
Owen-Sloan Co. & Cosden & Co., Inc., Roberts 9	1680	2978
Pure Oil Co., Otis Chalk 9	120	1721
Sun Oil Co., Settles 6	720	2558
PECOS COUNTY—		
The California Co., Smith 1, Lse. 5, (Sec. 16)	*	2078
WINKLER COUNTY—		
Atlantic Oil Prod. Co., Ida Hendrick 4	555	2920
Gulf Prod. Co., Ida Hendrick 2	445	2893
Humble O. & R. Co., Hendrick 8-B	6950	2710
Hendrick 1-C, Lse. 2	85	3055
Southern-Westbrook Interests, Hendrick 2-J-T-89	150	2920

SOUTHWEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
SALT FLAT—		
Shell, Floyd Tiller 4	2160	2682
Carter 2-B	320	2671
DUVAL COUNTY—		
Houston Oil Co., Benavides D-19, Cole field	200	2348
Magnolia, Hahl B-4, Schoolfield-O'Byrne pool	10	2347
Hahl B-2, Schoolfield-O'Byrne pool	*	5362
R. Driscoll, Fee 14	¶8-140	2894
JIM HOGG COUNTY—		
Randado Oil Corp., Palacios 33, Randado pool	30	1282
NUECES COUNTY—		
R. & G. Corp., Yakey 1, Aqua Dulce field	¶80	2021
WEBB COUNTY—		
Magnolia, Yeager-Strohman 14, Albercas pool	100	2172
Edward St. Alban's Holbein 5, Albercas pool	*	2165
Newton Drlg. Co., Bruni 4, Albercas pool	*	2175
A. W. Major, Holbein 1, Albercas pool	*	....

NORTH TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
ARCHER COUNTY—		
Akin & Rayzor, Finley 1	*	1755
C. U. Beasley et al, Abercrombie-Taylor 1	65	1385
Gulf Prod. Co., E. Alexander 2	40	1421
H. L. Ward 2-C	*	1215
Humble O. & R. Co., Hamilton 2-A	55	1183
O. R. Jeffers et al, Hamilton 1	*	1115
Madden & Hunt, Richardson 15	20	1279
McCarty Oil Co., McCrory 1	*	1850
Prairie O. & G. Co., Richardson 25-B	25	1298
Rathke Oil Co., Wilson 6-A	*	1580
F. P. Rose et al, Garvey 4	*	855
CLAY COUNTY—		
R. T. Belcher et al, Culbertson 1	*	413
Mid-Continent Holding Co., Stine 1	15	1810
COOKE COUNTY—		
W. J. Green et al, Compbell 4	*	825
Kewanne O. & G. Co., Timmis 6-A	130	1240
Timmis 1-B	100	1205
Shell Pet. Corp., Dennis 2	85	1255
ELECTRA—		
Red River Oil Co., Bywaters 31	*	2150
FANNIN COUNTY—		
Scrivner & Honea, Griffis 1	*	1300
K-M-A- AND IOWA PARK—		
J. Cable et al, Hones 2	*	360
Comac & Prairie O. & G. Co., Bishop 4	165	1790
Gulf Prod. Co., S. Mitchell 3	*	1834
Hammon & Garrett, Miller 1	*	1810
Humble O. & R. Co., W. H. Taylor 13	35	1493
WILBARGER COUNTY—		
Derby Oil Co., Waggoner 2-C	145	2376
Fain-McGaha Oil Corp., Waggoner 3-AA	120	2406
E. B. Lawson et al, Waggoner 15-B	110	2340
Phillips Pet. Co., Waggoner 8Q	35	2354
Waggoner Ref. Co., Waggoner 3-K	365	2388
Waggoner 4-K	200	2339
YOUNG COUNTY—		
Fain-McGaha Oil Corp., Campbell 5-E	*	950
King Royalty Co., Stewart 14	15	835
Stewart 15	*	862
Stewart 16	4	831
Stewart 17	15	828
Stewart 18	20	825
Stewart 19	20	830
Stewart 20	10	841
Stewart 21	50	844
Stewart 22	*	850
Stewart 23	70	853
May-Campbell Drlg. Co., Prideaux 1	55	563
Panhandle Ref. Co. et al, Prideaux 13-C	5	629
J. J. Perkins & Cullum, Gragg 3	*	852
Gragg 4	15	798
Stewart 7	25	815
Stewart 8	8	797
Stewart 9	9	797
Stewart 10	10	791
Stewart 11	20	787
Stewart 12	25	776
Stewart 13	25	786
Stewart 14	20	805
Stewart 15	45	798
Stewart 16	25	803
Stewart 17	30	787
Paull Oil Co., Allen 6	35	2100

TEXAS GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
ALLEN DOME—		
Shell, Randon 1, wo	*	5033
BARBERS HILL—		
Yount-Lee Oil Co., Richardson 3	*	2217
BATSON—		
Ada Belle Oil Co., McGoldrick Stateland 125	6	925
BLUE RIDGE—		
Gulf, Luscher 14	400	3530
Navarro Oil Co., Robinson A-4, dd	630	3950
BRENHAM—		
Lyne Oil Co., Hesse 1	*	1813
CLAY CREEK—		
Sun Oil Co., C. H. Marcus 1	700	1250
C. F. Grote 5	1500	1192
HIGH ISLAND—		
McLean Oil Co., Cade A-1	*	2400
HULL—		
Empire G. & F. Co., Barngrover 17, dd	700	3790
PIERCE JUNCTION—		
Anderson & Plummer, Whitehead 2.	1200	3810
RACCOON BEND—		
Humble J. C. Walton 2	300	3272
SOUTH LIBERTY—		
Sun Oil Co., Mitchell 33	*	1065
Mitchell 36	*	1290
Empire G. & F. Co., Groggan 1	*	3080
SUGARLAND—		
Humble, Deatheredge 2	500	3760
Nelson 1	300	3442

SOUTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
BLACK BAYOU—		
Shell, Watkins 7, Sec. 18-12s-12w, Cameron Parish	*	940
EDGERLY—		
Drysdale Savoy Oil Co., Hill 3	25	3150
EVANGELINE—		
The Texas Co., Latrielle 107	30	1760
HACKBERRY—		
Yount-Lee Oil Co., R. Vincent 1, Sec. 28-12s-10w	*	4150

NORTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
CADDO PARISH—		
Dixie Oil Co., Robert Shaw 91, 14-21-15	95	3693
Simplex Oil Co., Hunsicker 6, 15-20-15	*	2424
LA SALLE PARISH—		
Ayers Bros., Tremont 6, 30-10-2e	sw	1575
MOREHOUSE PARISH—		
Amalgamated Co., Fairley 3, 53-20-4e	¶8	2183
OUACHITA PARISH—		
Ouachita Nat. Gas Co., Leiber 5, 4-19-4e	¶9	2134
Palmer Corpn., Fee 5, 24-19-4e	¶1	2220
RICHLAND PARISH—		
Magnolia Pet. Co., D.R. Sartor 1, 21-16-6e	¶39,650,000	2448
Ouachita Nat. Gas Co., Pardue 5, 5-15-6e	¶39,420,000	2447
WEBSTER PARISH—		
Cotton Valley Oil Corpn., Hope 19, 24-21-10	¶4½	4700
UNION PARISH—		
United Carbon Co., Nichols 1, 6-20-3e	¶½	2141

ARKANSAS

Company, Well and Location	Initial Production Bbls.	Depth
UNION COUNTY—		
J. W. Hoosier, Slade 4, 3-17-14	sw	3332
Mazda Oil Corpn., Diffie 1, 16-17-14	*	3322
Ohio Oil Co., Frazier 2, 6-17-13	266	3054
Gulf Ref. Co., Gaddy 2, 30-17-14 ¶50 and	240	2859

EASTERN STATES

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
BRADFORD FIELD—		
South Penn Oil Co., Melvin 268, 269 270, 271, 272	pressure	
Melvin 273	2	....
Melvin 274	2	....
Melvin 275	2	....
Melvin 276	2	....
Melvin 277	2	....
Melvin 278	2	....
Melvin 279	2	....
Bingham 151, tr 41	2	....
Bingham 151, tr 42	4	....
Bingham 399, tr 4	3	....
Bingham 576, tr 15	3	....
Bingham 576, tr 16	3	....
Bingham 499, tr 5	2	....
Bingham 405, tr 1	3	....
Bingham 410, tr 40	3	....
Bingham-Johnson 53	2	....
Lee-Hallock & Co 103	2	....
Riddle 3	2	....
Smith 178	2	....
Bingham-Satterfield 151	3	....
Burdick 61	2	....
C. A. Duke, Scio 2	3	....
B. C. B. 19	7	....
Zook-Sloan Producing Co., Fee 18	4	....
Fee 19	2	....
Dana & Dana, Dana 3	3	....
Hazlewood Oil Co., Bingham 186, tr. 15	3	....
Lot 28, tr. 73	2	....
Lot 23, tr. 114	2	....
Lot 25, tr. 19	3	....

(Continued on pge 86)

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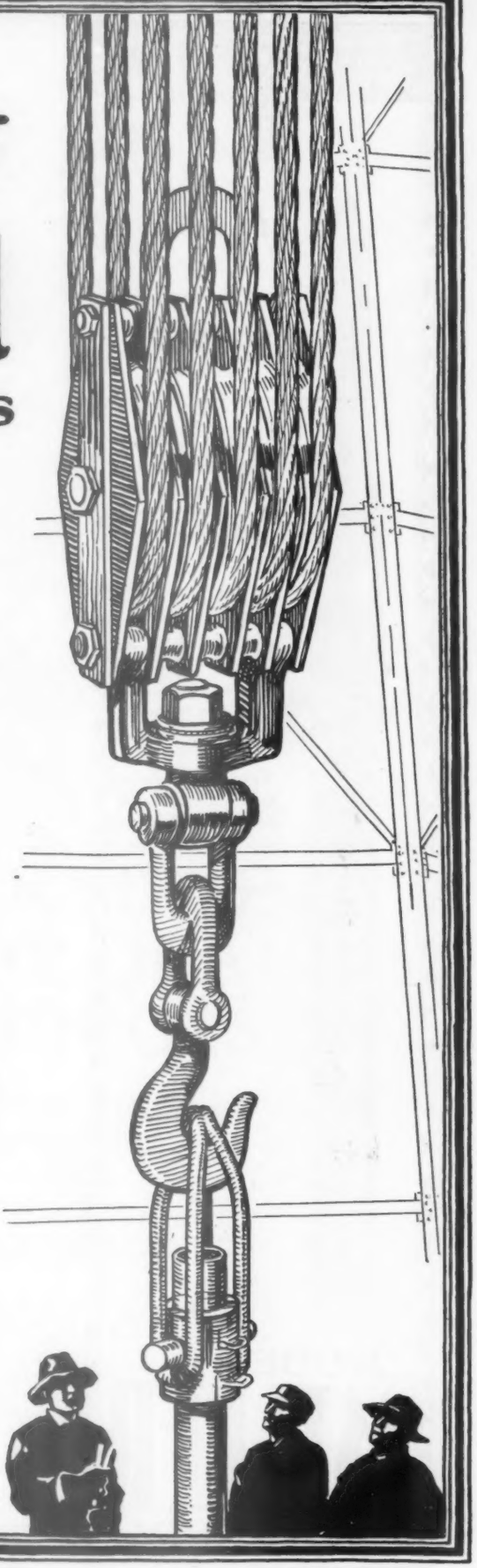

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HOUSTON TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
T. H. Kennedy, Lot 5, tr. 8	2	....
Lot 13, tr. 9	2	....
W. T. Piper & Co., Piper 8	3	....
G. W. Crooks & Co., Franchot 3	3	....
Associated Producers Co. Bingham 215 tr. 16	4	....
Woods & Evans, Huntington 5	2	....
Huntington 6	2	....
Jack & Co., Jack 5	4	....
Bliss Oil Co., Burns 4	2	....
J. L. Yerdon, Bingham 6	4	....
D. W. Daly, Bingham 389, tr. 59	2	....
GREENE COUNTY—		
Manufacturers Light & Heat Co., Gilmore 1	¶2	....
Carnegie Nat. Gas Co., Ingraham 1	¶1¾	....
Peoples Nat. Gas Co., Fox 1	¶1½	....
Nuss & McClay, Morris 1	*	....
BUTLER COUNTY—		
Phillips Gas & Oil Co., Penrose 2	¶11	....
Elliott & Reimer, Price 1	¶8	....
Dow Smith, Smith 5	2	....
M. B. Finnessy, Marshall 16	2	....
CENTER-MIDDLE FIELD—		
Nelson & Johnson, McWilliams 1	2	....
Perry Oil Co., Lot 106, tr. 13	4	....
VENANGO COUNTY—		
Fryburg Motors Co., McLaughlin 1	¶½	....
J. E. Keverling, Schwab 5	2	....
H. J. Hoffman, Cross 18	2	....
S. Y. Ramage, Stiles 79	2	....
R. F. Whitling, Huff 16	2	....
CLARION COUNTY—		
F. C. Diemer, Meherton 3	7	....
Whitling Bros., Morrison 1	2	....
Red Bank O. & G. Co., Reid 1	¶2	....

NEW YORK

ALLEGANY COUNTY—		
J. W. Bucker Est., Miller & Co. 1	2	....
McCaffrey & Co., McCaffrey 3	2	....
Gatlets, Stephan & Co., Fee 1	2	....
Forest Oil Co., Fee 1	2	....
C. C. Brennan & Co., Brennan 2	2	....
Alfred Ashworth, Ashworth 5	2	....
J. E. LeSuer & Co., Le Suer 50	2	....

WEST VIRGINIA

RITCHIE COUNTY—		
Hope Nat. Gas Co., Ayres 3	10	....
Carnegie Nat. Gas Co., Vincent 1	¶¼	....
Forest Maxwell, Maxwell 1	*	....
LINCOLN COUNTY—		
United Fuel Gas Co., Oxley 1994	¶½	....
Lewis Heirs, 2533	¶½	....
Heabon & Huffman, Courts Heirs 1	..	....
TYLER COUNTY—		
South Penn Oil Co., Lemasters 1	*	....
Hope Nat. Gas Co., George 7	¶½	....
Trainer Bros., Sheets 1	¶½	....
ROANE COUNTY—		
Grow & Decker, Mosford 2	¶¼	....
Hope Cons. & Ref. Co., Whitney 5	6	....
GILMER COUNTY—		
Hope Cons. & Ref. Co., Wilson 1	¶¼	....
South Penn Oil Co., Hardon 5	5	....
BOONE COUNTY—		
Ohio Fuel Gas Co., Horse Creek Land Co. 1995	2	....
Cameron O. & G. Co., Alderson 10	2	....
LOGAN COUNTY—		
Peck O. & G. Co., Peck Hrs. 3	¶½	....
Trojan Gas Co., Garrett 3	¶¼	....
JACKSON COUNTY—		
South Penn Oil Co., McCarty 2	20	....
LEWIS COUNTY—		
McCall Drlg. Co., Bergorhoff 1	¶2½	4200
CLAY COUNTY—		
United Fuel Gas Co., Brown-Goshorn 2534	¶¼	....
KANAWHA COUNTY—		
United Carbon Co., Osborne 21	¶1¼	....
MINGO COUNTY—		
Red Jacket Coal & Coke Co., Fee 5	¶5½	....

SOUTHEASTERN OHIO

MORGAN COUNTY—		
Penn Construction Co., Ewart 2	¶1	743
Kemrow Co., S. Hoffman 5	¶½	1570
H. Hoffman 4	¶¼	1643
Ohio Fuel Gas Co., Hammond 1	¶1	745
Choguill & Co., Johnson 4	¶1½	723
NOBLE COUNTY—		
Nau & Crock, Nau 7	¶½	830
MONROE COUNTY—		
Henry Shaffer, Wilhelm Bros. 1	¶¼	1914

KENTUCKY

OHIO COUNTY—		
Botts & Wheeler, Crow 1	40	....
C. D. Pratt & Co., Ralph 2	20	485
Snowden & McSweeney, Midkiff 12	8	704
Wood Oil Co., Mattox 9	15	....
Bolling & Co., Dickens 1	*	....
MAGOFFIN COUNTY—		
Hupp, Duff & Co., Frazier 7	25	....
WARREN COUNTY—		
William Gittings, McGinnis 6	1	1260
DAVIESS COUNTY—		
Pops Dev. Co., Taylor 4	30	....
Jetsan Oil Co., Hinton 2	40	....
Thompson & Co., Coomes 1	20	....
Imperial O. & G. Products Co., Hayden 6	15	....

CENTRAL OHIO

ATHENS COUNTY—		
Orondoff & Co., Dean 3	¶¼	1345
Glouster O. & G. Co., Angle 1	*	1045
Ohio Fuel Gas Co., Gifford 5	¶1	1500
Jones 2	*	3884
JACKSON COUNTY—		
Ohio Fuel Gas Co., Ford 1	*	2686
MEIGS COUNTY—		
R. A. Tyree & Co., Ebenback 2	5	1600
Wehrle O. & G. Co., Cross 2	25	610
HOLMES COUNTY—		
Arkansas Fuel Oil Co., Patterson 2	¶1¼-2	....
East Ohio Gas Co., Nowells 4	80	....
GUERNSEY COUNTY—		
Gordon Oil Co., Ross 1	25	3434
T. McLaughlin, Pazzo 3	¶¼	1075
KNOX COUNTY—		
Upham Gas Co., Kunkle 4	¶¾	....
Ohio Fuel Gas Co., Mix 1	*	....
MUSKINGUM COUNTY—		
Hope Cons. & Ref. Co., Helphrey 4	190	3098
LICKING COUNTY—		
Preston Oil Co., Wright 12	10	....
MEDINA COUNTY—		
Miller Longfellow, Fahrian 3	*	....
ASHLAND COUNTY—		
M. & S. Bartner, Obrecht 1	¶1¼	....
SUMMITT COUNTY—		
F. A. Brendall & Co., Grubb 1	¶3¼	4135
VINTON COUNTY—		
Townsend & Co., Quick 1	¶1½	1044

NORTHWESTERN OHIO

SENECA COUNTY—		
A. R. Smith, Smith 16	20	1278
ALLEN COUNTY—		
Metzger Bros., Metzger 4	15	1234
HARDIN COUNTY—		
Kurtz Gas Co., McKinley 2	*	1261

ILLINOIS

LAWRENCE COUNTY—		
Phipps, Blosser & Co., Des Bauef 1	*	1914
Ohio Oil Co., Gray 13	*	1714
CRAWFORD COUNTY—		
Ohio Oil Co., Thomas 6	2	....
CLARK COUNTY—		
Bohannon & Co., Miller 1	*	600
ST. CLAIR COUNTY—		
Ohio Oil Co., Thomas 1	*	800

MICHIGAN

MUSKEGON COUNTY—		
Wright Oil Co., Giles 1	1000	2046
Johnson O. & R. Co., Giles 1	300	2056
Balch Bros. & McIntosh, County Sanitorium 2	400	2063
Reed Oil Co., Young 4	600	....
Johnson Oil & Ref. Co., Grotefield 1	¶3-50	1672
Continental Motors Corp., Fee 8	115	1720
Muskegon-Great Lakes Oil Co., Jager 1	30	2062
Cihak 1	25	2069
J. A. Howard, Cook 1	50	1938
Wolfe Oil Co., Shanks Bros. 1	*	2174
Lilyseu Oil Co., Trierweiler 1	*	2133
Estes & Scott, Boyce 1	*	2077
M. R. Marsten, Zelenick 1	*	1865

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NAPHTHA — GAS — OILS
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CYLINDER—ENGINE—CORDAGE

GULF REFINING COMPANY

General Sales Offices

PITTSBURGH, PA.

District Sales Offices

New York Boston Philadelphia Louisville Atlanta Houston New Orleans

Ocean Terminals

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Providence, R. I.
New York Harbor (Bayonne, N. J.)
Jacksonville, Fla.
Port Tampa, Fla.
Mobile (Magazine Point, Ala.)
Philadelphia (Girard Point, Pa.)
Charleston, S. C.
Savannah, Ga.
New Orleans (Gretna, La.)
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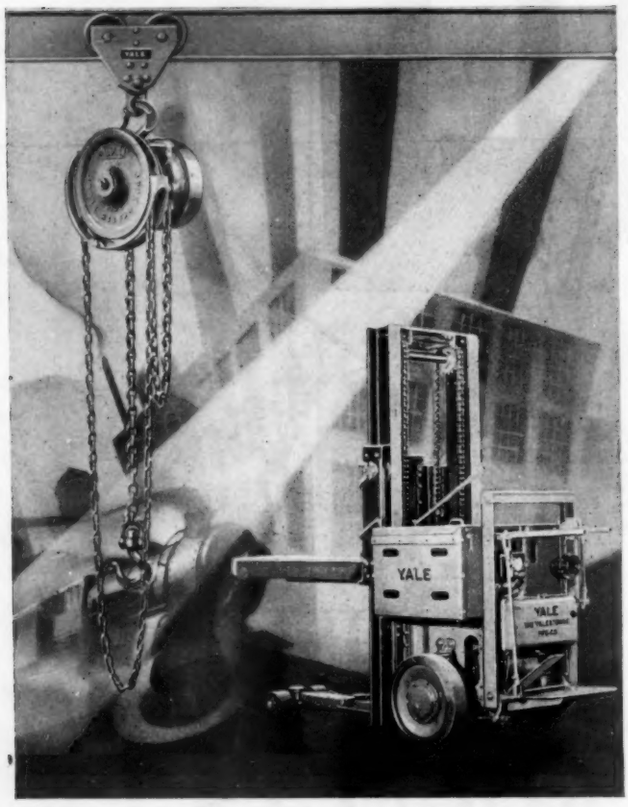
Carries the Loads of MODERN INDUSTRY



BEHIND every important industry lies the great fundamental need for rapid and efficient short haul transportation of materials. The never ending battle for greater production and lower overhead requires the use of unfailing, tried-and-true material handling equipment.

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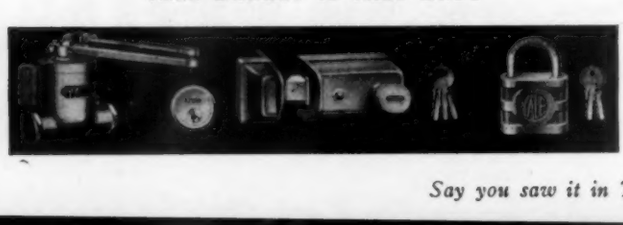

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WICKWIRE SPENCER UNIFORM WIRE ROPE
tests better than A.P.I. specifications

PERMITS GRANTED FOR NEW WELLS

CALIFORNIA

KERN COUNTY—Union Oil Co., KCLC 2, 5-10-21. Mineral Mountain Mining Co., No. 1, 7-27-19. Shell Oil Co., Rodgers-Jones 1, 21-26-28. Pacific Eastern Production Co., 8-KCL B-2, 22-29-27.

LAWNDALE—Barnsdall Oil Co., Bonney-Wright 1, 16-3-14. Union Oil Co., Johnson 1, 17-3-14. Shell Oil Co., Ozenne 1, 21-3-14.

LONG BEACH—Macmillan Pet. Corp., No. 9, 24-4-13.

LOS ANGELES COUNTY—Mohawk Pet. Co., Towell 1, 29-3-14.

MT. POSO—General Pet. Corp., Glide 21-25, 21-27-28.

NEWHALL—Pico Dome Oil and Gas Co., No. 1, 14-3-16.

KETTLEMAN HILLS—Standard Oil Co., No. 61, 11-22-17.

RICHFIELD—Southwestern Oil Co., Yorba Linda-Day 1, 21-3-19.

ROSECRANS—Richfield Oil Co., Rosecrans 2, 20-3-13.

SANTA FE SPRINGS—Bandini Pet. Co., Off 17, 5-3-11. General Pet. Corp., Santa Fe 232, 5-3-11. York-Smullin Oil Co., Wickman 4, 5-3-11. General Pet. Corp., Santa Fe 146, 5-3-11.

SANTA BARBARA COUNTY—Exeter Oil Co., No. 1, (—)-4-28. Standard Oil Co., Gerber 1, (-)-4-34. System Oil Co., No. 1, 36-10-34.

VENTURA—Shell Oil Co., Taylor 38, 28-3-23.

ARKANSAS

NEVADA COUNTY—Steel & Brewer, Rossston, Ark., Graves 1, 990 ft w 330 ft n Sec. se nw 21-14-20.

UNION COUNTY—J. O. Moore, Tr., El Dorado, Ark., Union Sawmill 1, 330 ft s 208 ft w nec nw sw 11-18-12.

KANSAS

BUTLER COUNTY—Shell, Peuner 1, nw ne 15- 24-3e. Smith & Ash, Cameron 1, ne cor 8-24-6e.

COWLEY COUNTY—Foster Pet. Co., Mitchler, se ne se, 9-32-de. T. B. Slick, Youle 3, se, 9-32-de.

ELLIS COUNTY—Prairie, Wieland 1, se nw, 1-13-16w.

GREENWOOD COUNTY — Independent, Sheppard 10, se ne nw, 11-22-10e.

OKLAHOMA

CADDO COUNTY—Caddo Oil Co., Bontrager 1, ne sw, 9-5n-9w.

COAL COUNTY—McGinely & Sigler, Wiltsey 1, nw se se, 7-2n-8e.

COTTON COUNTY—Amerada, De Lana 1, se nw nw, 31-4s-9w. Consolidated, Conklin 1, nw, 26-3s-11w.

CREEK COUNTY—C. G. Stibbens, Connesney 39, ne se nw, 30-15-9e. Madden & Madden, McNack 1, se ne se, 34-15-10e. Red Bank Oil Co., Page 1a, sw se ne, 34-16-10e. Transcontinental, Johnson 1, sw, 30-16-10. Collins et al, Halsell 1, nw se sw, 12-17-11e. L Emery et al, Hope 1, ne sw sw, 6-17-9e. Silurian, Starr 3a, ne, 17-18-7e.

GARFIELD COUNTY—Oil States, Barnes 1, (owdd) sw ne nw, 15-23-3w. C. E. Knox, Bangster 1, ne nw, 35-22-4w.

GRADY COUNTY—Wichoma Oil Corp., Morrison 1, ne, 28-4n-5w.

GRANT COUNTY—Marland & Wagoner, Frantz 2, sw se se, 35-28-3w.

HUGHES COUNTY—Independent, Yoahola 1, se sw ne, 6-8-9e. Independent, Marshall 1, ne nw, 7-8-9e.

KIOWA COUNTY—L. P. McWhirter 1, sw nw ne, 2-5n-17w. Ben S. Brown, Ditmar 1, ne, 19-6n-16w. Russell & Sloan, Funkhouser 1, c nw, 23-7n-17w. Engle et al, Kelsey 1, nw sw, 20-7n-17w.

LOGAN COUNTY—Shell, McCully 7, nw se se, 30-19-4w. Shell, McCully 8, se sw se, 30-19-4w. J. S. Cosden, Gardner 1, ne nw, 31-19-4w. Blackwell O. & G. & Texas Pacific, Quigley 1, se ne sw, 21-18-4w.

MUSKOGEE COUNTY—W. J. Metzger, Francis 7, cel sw sw, 1-14-18e. Arthur Oil Co., Hawes 20, se ne se, 33-15-18e.

OSAGE COUNTY—Kewanee O. & G. No. 9, sw ne nw se, 34-27-6e. J. W. Kelso, No. 1, se sw ne, 17-27-10e.

PAWNEE COUNTY—Houston Oil Co., Collins 1, nw sw sw, 19-20-7e. J. H. Markham, Jr., et al, Reynolds 8, nw sw sw sw, 25-21-8e. Peter Adamson Jr., Thomas 3, ne se se nw, 25-21-8e.

PONTOTOC COUNTY—Carter, Bates 1, se nw, 36-5-7e.

POTTAWATOMIE COUNTY—Pure, Wallace 2, se sw nw, 17-8-5e. Skelly, Wallace 1, sw se nw, 17-8-re.. Magnolia, Wilban 2, se nw se, 24-7-4e. Gypsy, Roseman 2, (owdd) cwl se nw ne, 26-7-4e.. Magnolia, Youts 5, se ne sw, 20-7-5e..

SEMINOLE COUNTY—Gypsy, Jones 2, se ne (owdd) 11-8-6e..

STEPHENS COUNTY—Ven Mex Pet.. Co. & Mid Continent, Bush 6, nw se ne nw, 3-2s-8w. Face et al, Woodhauser 1, se sw se, 36-1s-8w. Magnolia, Thomas 7, nw sw se se, 25-1n-9w. Wirt Franklin, School 3 (owdd) ne, 36-1s-9w.

WAGONER COUNTY—Ash Brothers, Drew 1, se sw sw, 15-18-17e .

TEXAS

ARCHER COUNTY—Dr. Chas. Wm. Wallace, Wichita Falls, Kemp & Kell 5, S.P.Ry sur, 1493 ft from w and 150 ft from s line. Rathke Oil Co., Wichita Falls, Netherton 2, S 1, S.P.Ry sur, 1470 ft from n and 1170 ft from e line. Texas Co., Wichita Falls, Scott 1, J. James sur, 1500 ft from w and 300 ft from s line. Freeman & Grebin, Wichita Falls, Haralson 1, G. P. Meade sur, 150 ft from n and w lines. Panhandle Ref. Co., Wichita Falls, Dwolin 1, S 2, HT&B sur, 150 ft from n and e lines. United Prod. Co., Wichita Falls, Kovar 1, W. E. Probert sur, 150 ft from s and w lines. Lea and Daniel, Wichita Falls, Williams 4, J. Hand sur, 150 ft from n and 1180 ft from e line. Donohoo & Jameson, Wichita Falls, Andrews 4, 1826 TE&L sur, 300 ft e of No. 1. Petroleum Prod. Co., Wichita Falls, Kunkel 1, S 3, BBB&C sur, 150 ft n and 750 ft from E line.

ATASCOSA COUNTY—W. R. Hamilton, San Antonio, Hughes 15, No. 518, H. Sharp sur, 560 ft s of No. 11.

ANDERSON COUNTY—Humble, Houston, Gouger 1, J. Trimmer sur, 969 ft from s and 600 ft from w line; Purvey 1, D. Clark sur, 450 ft from s and e lines.

BROWN COUNTY—J. E. Whiteside, Brownwood, Boysen 1, S 7, E.T.Ry. sur, 150 ft from n and 1170 ft from w line. E. T. Green, Brownwood, Riordan 2, C. B. Jennings sur, 450 ft from n and 900 ft from E line. G. W. McClung, Cisco, Smith 2, S 53, S Thom sur, 450 ft from e and 1350 ft from S line; Davis 1, K.C.S.L. sur, 1350 ft from n and 1650 ft from e line. Texas Co., Wichita Falls, Byler 5, S 43, T.&N. sur, 367 ft of No. 4. Harry Warren, Fort Worth, Duff 1, No. 623, R. Honeycutt sur, 150 ft from s and w lines. Amerada Pet. Corp., Wichita Falls, Smith 1, No. 202, E. R. Meyers sur, south central part of lease; Smith 2, No. 144, J. M. Cleveland sur, 1400 ft from nw 7 1239 ft from ne line. J. F. Brock, Brady, Joyner 160 1, S 145, A. Bates sur, 150 ft from s and w lines. Paul Diggs, Fort Worth, Wooten 1, S 614, M. M. Flores sur, 150 ft from e and 450 ft from s line. Humble, Wichita Falls, Armstrong 14, J. Delgado sur, 1209 ft from e and 1135 ft from s line.; Hodnett A20, J. M. Harris sur, 1738 ft from w and 560 ft from s line. Hart & Cobb, Inc., Dallas, Dixon 1, J. Grant sur, 480 ft from n and 300 ft from w line.

BRAZORIA COUNTY—Humphreys Corp., Houston, Bryan 1, C. Areola sur, 220 ft from w and 1000 ft from s line.

BREWSTER COUNTY—J. P. Johnston, Fort Worth, Jackson 1, S 104, B 10, G.H.&S.A. center.

CALDWELL COUNTY—Shell Pet. Corp., Luling, Carter, B 3, G. Hinds sur, 150 ft from n and 450 ft from w line; Smith 1, A. Floyd sur, 150 tt from s and e lines; Tiller 7, A. Floyd sur, 150 ft from n and 1150 ft from w line. Golden West Oil Co., San Antonio, Malone 3, A. Floyd sur, 450 ft from n and w lines. Gulf Prod. Co., Houston, Tiller 6, G. Hinds sur, 300 ft ne of No. 5; Wright A. 3, G. Hinds sur, 150 ft from s and w lines. Humble, Houston, Tiller 7, G. Hinds sur, 450 ft from w and 150 ft from s line; Moses A. 7, G. Hinds sur, 540 ft from s and e lines; Allen 7, G. Hinds sur, 1060 ft from w and 160 ft from s line; Allen 8, G. Hinds sur, 150 ft from n and 1168 ft from w line; Moses B. 2, S. Shupe sur, 150 ft from s and 395 ft from e line; Wright 1, G. Hinds sur, 150 ft from n and w lines.

CALLAMAN COUNTY—Texas Co., Wichita Falls, Hatchett 20, S 23, D&D Asy. sur, 330 ft s of No. 3; Hatchett 22, S 23, D.&D. Asy sur, 467 ft from w and 150 ft from s line; Hatchett 21, S 23, D.&D. Asy sur, 150 ft from n and w lines. Humble, Wichita Falls, Head & Head A2, S 29, B 8, S.P.Ry sur, 1170 ft from n and 200 ft from E line. C. A. Redmond et al, Abilene, Moore 4, B 6, S 9, S.P.Ry sur, 200 ft from e and 250 ft from s line.

COLEMAN COUNTY—T. B. Slick, Cross Plains, Roberts 1, D. J. Holt sur, 1170 ft from w and 1470 ft from s line. Shell Pet. Corp.,

WEEKLY COMPARISON OF NEW WELLS

Following is a condensed table giving a comparison of permits or locations made for new wells during the past year in Kansas, Oklahoma, Arkansas, Louisiana, Texas, California and the Mountin States:

	Week ending Feb. 23	Previous week	Total this month	Total this year	This week Last Yr.	This month 1928	1928 year total
Arkansas	2	1	9	23	2	11	331
California	22	23	138	238	24	95	1,207
Louisiana	19	8	61	110	13	42	680
Kansas	6	7	51	149	47	111	1,032
Oklahoma	44	37	215	486	70	231	3,744
Texas	108	120	626	1,221	101	502	8,297
Total	201	196	1,101	2,228	257	992	15,291

California Permits

Los Angeles. — Permits issued for new wells in California since January 1 show a sharp increase over the number issued at the same time last year, the total for 1929 standing at 219, as compared with only 157 during the corresponding period of 1928. Santa Fe Springs and Lawndale have been the chief contributors this year, with wildcats accounting for a good portion of the total. Long Beach has at last shown a sharp decline in the number of new wells, after accounting for a large percentage each week long after the drilling campaign was slated to end.

SPEED

in Drilling Makes Money

No Choking Up

Note that water courses lead direct to cutting edge. This design has accomplished a maximum cooling effect. The cuttings are rapidly broken up and washed away in solution thus obviating choking up.

Retains Cutting Edge

A principle in the design is that the blades are formed concavely favoring cutting edges for both bottom and side of hole. Attained by hard facing, permitting wear on back to retain cutting edge.

Write for illustrated folder.

B.K.APPLEMAN

BEAUMONT, TEXAS

Wichita Falls, Weaver 1, S 271, B 17, A. Gable sur, 150 ft from n and w lines. Broderick & Calvert, Fort Worth, Weaver 1, No. 271, A. Gable sur, 150 ft from w and 200 ft from s line.

CHAMBERS COUNTY—Mills Bennett Prod. Co., Houston, Barber 1, H. Griffith sur, 1850 ft from s and 50 ft from e line.

COOKE COUNTY—Kewanee Oil & Gas Co., Tulsa, Okla., Lanier A 7, E.T.Ry sur, 50 ft sw of No. 5.

CHEROKEE COUNTY—Humble, Houston, Elliott & Clark B1, M. Garcia sur, 1550 ft from n and 743 ft from e line.

DUVAL COUNTY—Magnolia Pet. Co., Dallas, Hahl 5B, S 61, Rosita Valley sur, 300 ft w of No. 2.

EASTLAND COUNTY—R. C. Outlaw, Ranger, Terrell 1, S 17, McL.C.S.L. sur, 225 ft from n and 430 ft from e line.

FORT BEND COUNTY—Gulf Prod. Co., Houston, Invincible 7, T. Hobermaker sur, 200 ft s of No. 6. Watts Oil Co., Houston, Scott 3, B. A., E. Drew sur, 50 ft from n and 40 ft from e line; Blakely 9, lot 10, B. B., E. Drew sur, 75 ft from w and 215 ft from s line. Humble, Houston, Hughes 15, Wm. Little sur, 150 ft from ne and 165 ft from nw line.

FOARD COUNTY—Shell Pet. Corp. Houston, Tarver 1, S 3, G.C.&S.F. sur, 150 ft from n and w lines.

FISHER COUNTY—Texas-Phillips, Fort Worth, Hall 1, S 6, B 20, T.&P. sur, 330 ft from s and e lines.

GRAY COUNTY—Shell Pet. Corp., Tulsa, Okla., McConnell 2, S 174, B 3, I.&G.N. sur, 330 ft from n and w lines.

HOWARD COUNTY—Ward Oil Corp., Ardmore, Okla., Roberts 7, S 137, B 29, W.&N.W. sur, 380 ft from w and 330 ft from n line. Comet Pet. Corp., Fort Worth, Clay 3, S 154, B 29, W.&N.W. sur, 200 ft from n and w lines.

HARDIN COUNTY—Paraffine Oil Co., Houston, Knight 45, T. Knight sur, 148 ft from n and 20 ft from e line.

HARRIS COUNTY—Gulf Prod. Co., Houston, Taylor 28, No. 52, J. Hamilton sur, 85 ft from n and 80 ft from e line.

JONES COUNTY—Texas Co., Wichita Falls, Carter 6, S 13, B 19, T.&P. sur, 200 ft n and e lines; Camp 2, S 13, B 19, T.&P. sur, 373 ft from e and 2829 ft from s line. Humble, Wichita Falls, Bickley 1, S 50, B 18, T.&P. sur, 330 ft from s and 200 ft from w line.

JACK COUNTY—Teidecker & Ama Bell Oil Co., Cisco, Kuykendall 1, I. Hughson sur, 300 ft from n and w lines. Buttram Pet. Corp., Oklahoma City, Okla., Cullers 3, T. Sporer sur, 285 ft from n and 250 ft from w line.

JEFFERSON COUNTY—Gladys Yount-Lee Oil Co., Beaumont, Gladys 81, B 99, I. A. Veatch sur, 15 ft from w and 135 ft from n line; McFaddin 95, P. Humphrey sur, 973 ft from w and 725 ft from n line. Gulf Prod. Co., Houston, Bordages A 7, M. Bowes sur, 100 ft n of center of s line; Thomas 11, W. H. Smith sur, 55 ft from n and e lines.

LIBERTY COUNTY—Fort Bend Oil Co., Houston, Riviere 1, M. G. White sur, 50 ft from n and 200 ft from e line. Jefferson Oil Co., Beaumont, Turner 1, White sur, 100 ft from e and 50 ft from s line. Humble, Houston, Sterling 4, J. McFadden sur, 13327 ft from w and 100 ft from n line.

MOTLEY COUNTY—Exploration Co. of Texas, San Angelo, Matador 6, S 132, B. M. Matador sur, 330 ft from n and e lines; Matador 5, S 46, B JB, G.B.&C.N. sur, center of section.

MAVERICK COUNTY—Rycade Oil Corp., Houston, Chittim 4, S 104, B 7, I.&G.N. sur, east central part of lease; Sullivan 4, S 112, B 7, I.&G.N. sur, east central part of lease.

MILAM COUNTY—Central Texas Refg. Co., Corsicana, Isaac 2, T. J. Chambers sur, 150 ft from s and w lines.

PANOLA COUNTY—Magnolia Pet. Co., Dallas, Adams 3, F. J. Jones sur, 550 ft from n and 280 ft from w line.

REAGAN COUNTY—Big Lake Oil Co., Texon, University 149, S 1, B 2, Univ. lands sur, 520 ft w of No. 119.

RUNNELS COUNTY—Independent Oil & Gas Co., Midland, Rollwitz 1, S 20½ sur, 330 ft from n and e lines.

SHACKLEFORD COUNTY—Scott & Walker, Albany, Huskey 7, 568 T.E.&L. sur, 300 ft w of No. 1. Union Oil & Mining Co., Tulsa, Okla., Huskey, 31, 548, T.E.&L. sur, 430 ft from w and 300 ft from n line. Roeser & Pendleton, Inc., & Marland Oil Co., Fort Worth, Cook A37, S 61, E.T. Ry. sur, 499 ft w of No. 35.

WICHITA COUNTY—Harry Hines, Wichita Falls, Waggoner 1, M. A. Willis sur, 1000 ft from w and 1272 ft from n line. Humble, Wichita Falls, Taylor 15, B 81, W.V.F.L. sur, 30 ft w of No. 11. J. G. Rowe, Wichita Falls, Waggoner 1, S 2, B 13, G.C.&S.F. sur, 150 ft from n and 1050 ft from e line.

WHEELER COUNTY—Lone Star Gas Co., Dallas, Turnbow 1, S 87, B 17, H.&G.N. sur, 662 ft from e and 661 ft from n line.

WILBARGER COUNTY—Waggoner Ref. Co., Inc., Electra, Waggoner H 1a, S 24, B 4, H.&T.C. sur, 190 ft from n and 181 ft from w line.

WASHINGTON COUNTY—Sun Oil Co., Dallas, Caraway 1, J. F. Berry sur, 200 ft from se and 150 ft from sw line.

YOUNG COUNTY—Jake Bundy, Olney, Davis 1, 1395, T.E.&L. sur, 150 ft from s and e lines. Wise & Jackson, Graham, Calvin 4, A. Rohus sur, 300 ft w of No. 1. Calvin 5, A. Rohus sur, 300 ft w of No. 4. W. R. Duke, Wichita Falls, Orr 1, 1922, T.E.&L. sur, 150 ft from n and e lines. A. W. Johnston, Graham, Garvey 1, 1857, T.E.&L. sur, 150 ft from s and 450 ft from w line. Steed & Gaus, Wichita Falls, Loftin 1, S 2, C.T.Ry. sur, 150 ft from s and w lines. E. C. Stovall, Graham, Fee 12, J. Tobin sur, ne corner. E. W. Walton, Graham, Prideaux 1, S. Tynes sur, 150 ft from na and w lines. Walton & Cunningham, Graham, Prideaux 2, S. Tynes sur, 378 ft e of No. 1. Barkley & Meadows, Wichita Falls, Stewart 23, D. Dawson sur, 300 ft w of No. 21. Johnston, Powell & Bratcher, Graham, Drum 1, S. Tynes sur, 150 ft from e and 450 ft from s line. M. L. Richards, Wichita Falls, Campbell 3, 1389, T.E.&L. sur, 600 ft e of No. 1. Fain-McGaha Oil Corp., Wichita Falls, Campbell 5, 1371, T.E.&L. sur, 600 ft from e and 50 ft from n line. Allday Oil Corp., Wichita Falls, Johnson 1, E. W. Sargent sur, 150 ft from s and e lines. J. A. Cunningham, Mineral Wells, Edwards 1, S. Tynes sur, 690 ft from n and 150 ft from e line.

ZAPATA COUNTY—South Texas Prod. Co., Laredo, Jennings 4, C. Blanco sur, 8340 ft from sw and 6925 ft from se line.

LOUISIANA

BOSSIER PARISH—R. L. Crook, Shreveport, Larkin 10, 14-19n-11w, 600 ft s and 300 ft e of nw c sw.

CADDO PARISH—Bayou State Oil Corp., Shreveport, Jolley 26, 22-22n-15w, 28 ft n and 300 ft w of se c se nw.

CALCASIEU PARISH—J. O. Davis, Beaumont, Tex., Mims 1, 20-9s-7w, 1420 ft e and 100 ft s of nw c.

CAMERON PARISH—Shell Petroleum Corp., Houston, Tex., Watkins 8, 18-12s-12w, 830 ft w and 871 ft s of nec. Sun Oil Co., Beaumont, Tex., Vincent 1, 28-12s-10w, 68 ft e and 66 ft n of sw c ne sw.

DE SOTO PARISH—De Soto Synd., Shreveport, La., Mrs. L. T. Holmes 1, 20-13n-16w, 1980 ft n and 660 ft w of se c. Williams 1, 29-13n-16w, 3300 ft e and 660 ft n of sw c.

LA FOURCHE PARISH—Union Sulphur Co., Sulphur, Dibert, Stark & Brown Cypress Co., 71-15s-15e, 1270 ft n and 1992 ft e of swc.

LA SALLE PARISH—Kinney-Hardtner-Randle, Urania, Kinney 1, 7-10n-2e, 450 ft s and 200 ft w of ne c sw sw.

MOREHOUSE PARISH—Interstate Nat. Gas Co., Inc., Kate and Mary Fleming 1, 15-20n-4e, 681 ft e and 495 ft s of nw c lot No. 12 in Sec. 15. Southern Carbon Co., Monroe, Miles No. 2, 1-20n-4e, 1411 ft s and 760 ft e of nw c sw.

OUACHITA PARISH—Pioneer Gas Co., Monroe, Tom Jones 2, 14-18n-4e, 78 ft s and 247 ft e of southerly cor of Sec. 17 in Sec. 14.

RICHLAND PARISH—Austin & McDonald, Monroe, Millsaps 1, 17-17n-6e, 660 ft n and 1980 ft e of sw c nw; Millsaps 2, 17-17n-6e, 660 ft n and 660 ft e of sw c nw; Millsaps 3, 16-17n-6e, 1980 ft s and 660 ft e of nw c; Millsaps 4, 16-17n-6e, 660 ft s and 660 ft e of nw c. Richland Operating Co., Monroe, Humble 1, 30-16n-7e, 1420 ft e and 1980 ft s of nw c.

ST. MARTIN PARISH—The Texas Co., Shreveport, St. Martin Land Co. Fee 1, 28-9s-7e, 900 ft n and 700 ft w of center of Sec.

WEBSTER PARISH—Pat Hudson, Dallas, Slack 1, 1-22n-11w, 50 ft n and 250 ft e of sw c nw ne. Magnolia Pet. Co., Shreveport, Cook 1, 2-22n-11w, 331 ft n and 378 ft w of se c of E½ of ne ne; Marshall 6, 21-21n,10w, 660 ft n and 660 ft w of se c sw se.

WILDCATS FROM ALL SECTIONS

CALIFORNIA

KERN COUNTY

BELRIDGE—H. J. Bardwell's 1, 24-28-20, making production test, td 1005 ft.

BUTTONWILLOW— Doheny-Stone Drilling Corp.'s Salisbury 1, fsh 4750 ft. Milham Exploration Co.'s Harris 1, 8-28-23, dr shale 875 ft. Richfield's Kerwin 1, 2-18-29, coring 4800 ft.

COMANCHE POINT—W. W. Stabler's 1, 23-32-29, fsh 3390 ft.

DELANO—S. A. Delzel's Vedder 1, 4-26-27, dr gray sand, 3977 ft.

EDISON—Midway-Northern Oil Co.'s Brown 1, 29-29-30, co 3750 ft. Symark Oil Co.'s 1, 24-29-29, dr shale 1110 ft.

GOULD HILLS—Bomke and Ball's Larson 1, 19-29-20, dr shale 2210 ft. Elmer Oil Co.'s 1, dr brown shale 1500 ft. Ozena Oil Co.'s 1, 27-29-21, co 2900 ft.

McKITTRICK—The Texas Co.'s Aldridge 1, 4-30-22, dr shale 2805 ft.

KERN RIVER—H. H. Bell's 1, 6-28-28, new lcn. Section 26 Oil Co.'s 1, 26-28-26, dr gray sand 1650 ft.

RIO BRAVO—Pacific Coast Oil Co.'s 1, 15-19-25, sd 50 ft. Elmer Oil Co.'s 1, 8-28-25, dr shale 5600 ft.

SAN EMIDIO—Standard's KCL-1, 35-11-22, rig burned down, td 3780 ft. Union's KCL-2, 5-10-21, rig.

SANTA BARBARA COUNTY

CARPENTERIA — Continental's Franklin 1, sd 3990 ft.

GOLETA — Elwood Consolidated Oil Co.'s Rekar 1, 8-4-29, sd 3310 ft.

ORELLA—Shell's Rutherford 1, 36-5-31, coring 1515 ft.

POINT CONCEPCION—Standard's eGrber 1, dr shale 250 ft.

SANTA MARIA—Shell's Union Sugar 1, 36-10-35, coring shale 2015 ft.

TORTUGA CANYON—Standard's Schyvers 1, dr sandy shale 1235 ft.

VENTURA COUNTY

CAMARILLO—American Oil Co.'s 1, 33-2-20, dr basalt 795 ft.

CONEJO—Triunfo Oil Co.'s 1, 24-1-19, dr shale 540 ft.

FILLMORE — Frank Oil Co.'s 1, 35-4-20, rigging up. Federal Oil Co.'s Elkins 1, 5-3-19, 8⅝-in cas sdtr to bottom, td 2950 ft. Sterling Oil Co.'s Elkins 1, 5-3-19, repairing derrick, td 3985 ft.

HUENEME—The Texas Co.'s Barnard 1, lcn.

OJAI—R. E. Burke's McDonnell 1, 11-4-23, sd 2840 ft. Continental's Fox 1-M, 21-4-22, dr shale 3760 ft; Thompson 1-A, dr brown shale 5133 ft. E. J. Miley's Casitas 2-A, 12-3-24, re-dr 700 ft.

PIRU—Pacific Western Oil Co.'s 5, 3-4-28, dr hard sand 3375 ft.

SANTA PAULA—W. W. Bryant's Anlauf 2, 21-4-21, cmt 6⅝-in cas 750 ft.

SATICOY—Standard's Citrus 5, 10-2-22, 11-in cas cmt 4655 ft.

SESPE—The Texas Co.'s McGuire 1, 2-3-19, lcn.

SIMI—Shell's Marr 1, 31-3-17, coring shale 1765 ft.

SOUTH MOUNTAIN — Ring Pet. Corp.'s Converse 1, 23-3-21, on production test, td 4840 ft. Made 80 bbls in 8 hours.

MISCELLANEOUS

FRESNO COUNTY—Currency Pet. Co.'s 1, 28-21-14, dr shale 1235 ft. Dudley Ridge Oil Co.'s 1, 12-23-19, dr 875 ft. Hornaday and Huggins 1, 32-14-28, dr shale 515 ft. K. C. L. Oil Co.'s 1, 7-19-15, rig. Paragon Oil Co.'s 19, 17-19-15, rigging up.

MERCED COUNTY — Applegate and Renshaw's 1, 24-6-10, cmt 18-in cas at 2245 ft.

MONTEREY COUNTY—Shell's Dudley 1, 15-22-9, dr hard shale 450 ft.

SAN LUIS OBISPO COUNTY—L. E. Borring's 1, 13-32-22, dr shale 375 ft. Dollar Oil Co.'s Phelps 1, 13-32-22, dr shale 600 ft; Vishu 1, 22-32-22, co 1800 ft. North Star Oil Co.'s 1, 11-22-28, fsh for dr pipe 2850 ft. Lincoln Drilling Co.'s 1, 18-32-23, dr 380 ft. Panorama Oil Co.'s 1, 7-31-21, pulling 6¼-in cas, td 3420 ft. Purman Oil Co.'s 1, 12-32-22, dr shale 1200 ft. See Canyon Oil Co.'s 1, 18-31-12, dr shale 1155 ft. Texas Coal and Oil Co.'s Dutton 1, 25-32-14, dr shale 733 ft. Union's Russ 1, 34-32-15, re-dr 3050 ft; Chandler 1, 12-32-15, sr 2625 ft.

TULARE COUNTY — Angiola Development Co.'s 1, 27-22-23, dr gray sand 4400 ft. Big Four Drilling Co.'s 1, 29-23-27, re-dr 4320 ft. Kings-Tulare Synd.'s 1, 19-21-23, trying to perforate liner, td 5785 ft.

ABBREVIATIONS

NOTE—The following is the explanation of abreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn—abandoned; bbls—barrels; b.s.—basic sediment; cas casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

OKLAHOMA

WOODS COUNTY—T 28n, R 18w, Sec. 11, Geo. Vincent et al's Freedom, c sw, ponds for deep test.

GRANT COUNTY—T 28n, R 3w, Sec. 24, Lario O. & G. Co. et al's Conneil, nwc, dr 3075 ft.

HARPER COUNTY—T27n, R 21w, Sec. 24, A. F. Kopisch Selman 1, nec se, spudded and sd.

WOODS COUNTY—T 27n, R 16w, Sec. 33, Sinclair's Share 1, c ne sw, rig; T 27n, R 15w, Sec. 20, Sooner State Oil Co. and E. R. Black's Marcum 1, c sw, spudded and sd.

GRANT COUNTY—T 26n, R 4w, Sec. 34, Sooner State Oil Co.'s Royce 1, swc nw, sd, 550 ft.

KAY COUNTY—T 26n, R 2e, Sec. 32, J. A. Vincent and National Union's McNeal 1, nw cor ne, sd 2795 ft.

HARPER COUNTY—T 25n, R 22w, Sec. 14, Hoffer Oil Co.'s Cooper 1, nwc se, sd 4182 ft, blk in litigation.

WOODS COUNTY—T 25n, R 15w, Sec. 10, Bu Vi Bar et a,'s 1, sec sw, to 4280 tearing down rotary tools.

GRANT COUNTY—T 25n, R 4w, Sec. 22, Cowden's Vollner 2, nec se ne sw, lost tools 5640 ft, sd.

CIMARRON COUNTY—T 5n, R 5e, Sec. 22, Magnolia's School Land 1, c se ne, fish drill pipe 470 ft.

TEXAS COUNTY—T 18n, R 18e, Sec. 11, Three Way Oil Co.'s Price 1, sec nw, ts 3318-58hfw, td 3504 ft, dry and abandoned.

WOODWARD COUNTY—T 24n, R 17w, Sec. 32, Otstot Dev. Co.'s Simmons 1, sec, sd 1500 ft.

WOODS COUNTY—T 24n, R 13w, Sec. 18, Miller's and others Copenhaver 1, nwc, spudded and sd.

ALFALFA COUNTY—T 24n, R 11w, Sec. 14, Washoma Oil Co.'s Acre 1, swc ne, rig.

GARFIELD COUNTY—T 24n R 6w, Sec. 9, Pulse & Beamer's White 1, sec nw, sd 4755 ft.

WOODWARD COUNTY—T 23n, R 20w, Sec. 9, Billy Oil Co.'s Wyatt 1, c se, sd 2300 ft.

MAJOR COUNTY—T 23n, R 16w, Sec. 4, Wilson et al's 1, nec sw, rigging up.

WOODWARD COUNTY—T 21n, R 19w, Sec. 15, Burgoyne Bros.'s 1, swc se ne, sd 1950 ft.

WOODWARD COUNTY—T 21n, R 21w, Sec. 25, Sharon's Elmore 1, swc, sd 3025 ft, rig down.

MAJOR COUNTY—T 20n, R 14w, Sec. 23, Keller et al's Horton 1, c ne ne, spudded and sd.

GARFIELD COUNTY—T 20n, R 4w, Sec. 9, Marland's Looman 1, nec se, sd 5735 ft, csg parted temporarily abn; Sec. 12, Marland's Miller 1, swc, sd 4586 ft.

DEWEY COUNTY—T 18n, R 15w, Sec. 9, Huckleby & McCoy's Perfect 1, nec, dlg 4470 ft.

LOGAN COUNTY—T 18n, R 3w, Sec. 33, Haley & Consolidated Drlg Co.'s Quier 1, sec sw, 3970 ft sd.

KINGFISHER COUNTY—T 16n, R 6w, Sec. 27, Crawford & McKenna's Sturgeon 1, sec sw, sd 4895 ft.

BLAINE COUNTY—T 15n, R 12w, Sec. 26, W. J. Donley's Dickens 1, sec nw, sd 4509 ft.

CANADIAN COUNTY—T 14n, R 6w, Sec. 9, A. D. Spear's Piatt 1, sec ne, sd 3223 ft; T 13n, R 10w, Sec. 18, Wirt Franklin & I. T. I. O.'s North 1, c ne ne, td 3702 ft, abandoned running tow.

OKLAHOMA COUNTY—T 13n, R 3w, Sec. 18, Slick & Bailey's Lufkin 1, c ne se, drlg 5060 ft; T 12n, R 3w, Sec. 15, Cromwell et al's Thompson 1, sec ne ne, drlg 7172 ft.

CANADIAN COUNTY—T 10n, R 6w, Sec. 1, J. V. Bailey's Robinson 1, c ne nw, sd after spudding.

OSAGE COUNTY—T 22n, R 8e, Sec. 8, Harry McGill's 1 sw c se, show gas 2335-49 ft, sd 2688 ft.

PAWNEE COUNTY—T 22n, R 5e, Sec. 33, Washoma Oil Co.'s Buffalo 1, sec nw, sd 3812 ft, pb to 3200 ft, sd.

LINCOLN COUNTY—T 16n, R 4e, Sec. 15, J. V. Bailey et al's House 1, c ne se, dlg by tools 3660 ft; T 16n, R 5e, Sec. 2, L. C. Wheeler & W. K. Mote et al's Wolfe 1, nwc ne sw, dlg 2045 ft. T 16n, R 6e, Sec. 19, Flynn & Morgan's Finley 1, swc, R. O. G. T 12n, R 3e, Sec. 29, Phillips' Roberson 1, sec nw, rig.

MUSKOGEE COUNTY—T 13n, R 18e, Sec. 33, L. T. Haynie's Linder 1, c se, drlg 2340 ft.

McINTOSH COUNTY—T 12n, R 18e, Sec. 15, A. B. Wolfe et al's Beck 1, nwc se, spudded and sd.

PITTSBURGH COUNTY—T 9n, R 16e, Sec. 32, Pattison et al's McDuff 1, swc nw se, Wilcox 5443-71 ft, drlg.

HASKELL COUNTY—T 9n, R 18e, Sec. 10, Marion Oil Co.'s Sanders 1, nwc ne sw, sd 1800 ft.

LATIMER COUNTY—T 5n, R 18e, Sec. 15, Limestone O. & G. Co.'s Murray 1, swc, 1½M gas 2518-22 ft, sd 2740 ft.

OKFUSKEE COUNTY—T 11n, R 7e, Sec. 21, T. B. Slick's Wolfe 1, sec ne se, cemt 8 in, 4000 ft.

SEMINOLE COUNTY—T 11n, R 7e, Sec. 34, Phillips' Mills 1, nwc sw, sd 3950 ft.

CLEVELAND COUNTY—T 10n, R 2w, Sec. 8, Slick and Phillips' Sudik 1, c ne ne, drlg 4950 ft.

SEMINOLE COUNTY—T 10n, R 6e, Sec. 16, McCullough et al's Lincoln 1, sec nw, R. U. R. T 10n, R 7e, Sec. 5, Marland Oil Company's Srothers 1, nwc se ne, dlg 4021 ft.

POTTAWATOMIE COUNTY—T 8n, R 2e, Sec. 24, Superior Oil Corp.'s Jones 1, swc nw ne, sd 5397 ft. T 8n, R 3e, Sec. 12, T. B. Slick's Nix 1, sec nw nw, cemtg 8 in, 4600 ft.

SEMINOLE COUNTY—T 8n, R 8e, Sec. 4, McCulloch's McGilbray 1, swc ne, ts 3285 ft, td 3325 ft, hfw fig burned.

CLEVELAND COUNTY—T 7n, R 1w, Sec. 15, Sooner State Oil Co.'s Vandeveer, nec nw sw, sd 3120 ft.

POTTAWATOMIE COUNTY—T 6n, R 4e, Sec 19, Rush & Baughm's Laster 1, sec ne ne, drlg 1660 ft.

McCLAIN COUNTY—T 5n, R 3e, Sec. 22, Mid Cont. Pet. Corp.'s 1, sec, rigging up. T 5n, R 3e, Sec. 29, Empire's Bonner 1, sec nw nw, top Wilcox 4789 ft, td 4800 ft, hfw, sd.

PONTOTOC COUNTY—T 5n, R de, Sec. 36, Denver P. & R.'s Roberts 1, sec ne ne, dlg 1475 ft.

HUGHES COUNTY—T 5n, R 9e, Sec. 17, E. W. Whitney's Huddleston 1, sec sw, ur 6-in, 3345 ft.

PONTOTOC COUNTY—T 4n, R 8e, Sec. 23, Independent's Hampton 1, nec se, dlg 300 ft

PITTSBURGH COUNTY—T 4n, R 12e, Sec.

32, Kerr & Key's Rall 1, c nw nw, setg 12 in, 100 0ft.

COAL COUNTY—T 2n, R 8e, Sec. 6, J. S. Cosden's Richardson 1, nwc ne ne, spudding.

MURRAY COUNTY—T 1n, R 2e, Sec. 17, Revels & McGee's Wolfe 1, nwc, sd 1850 ft.

GARVIN COUNTY—T 1n, R 3e, Sec. 32, Ramsey's Malickey 1, c sw ne, dlg 1047 ft.

COAL COUNTY—T 1n, R 9e, Sec. 24, Galbreath et al's Jones 1, swc se, sd 3270 ft.

CUSTER COUNTY—T 14n, R 14w, Sec. 1, W. E. Witt's Wellman 1, c se, sd 100 ft.

ROGER MILLS COUNTY—T 11n, R 26w, Sec. 4, L. C. Hivick's Davis 1, c nw ne, sd 700 ft.

BECKHAM COUNTY—T 8n, R 25w, Sec. 1, C. L. Martin's Daly 1, c nw se, sd 3036 ft. T 8n, R 22w, Sec. 20, Carson et al's Denby 1, swe se ne, sd 1020 ft. T 8n R 21w, Sec. 33, Day Oil Co.'s Ault 1, c nw nw, sd 1508 ft.

KIOWA COUNTY—T 7n, R 17w, Sec. 34, G. B. Cloyes' Bristle 1, swc ne, td 961 ft, small show oil. T 7n, R 15w, Sec. 35, David Malernee's Van Kirkland 1, nwc, sd 858 ft, flowing splphur water. T 6n, R 14w, Sec. 32, Russel & Sloan's Madden 1, nec sw sw, td 952 ft, abn in granite.

CADDO COUNTY—T 6n, R 12w, Sec. 29, W. J. Hartley's Galbreath 1, sec nw se, (owdd) sd 3394 ft.

COMANCHE COUNTY—T 4n, R 11w, Sec. 2, Wirt Franklin Pet. Corp.s Hollow 1, nwc, fsh 3628 ft.

JACKSON COUNTY—T 1n, R 20w, Sec. 4, Houseman et al's Northington 1, nec, sd 2020 ft.

KIOWA COUNTY—T 1n, R 17w, Sec. 13, Allen Bros.'s Howell 1, nwc se, rep rig 614 ft, td small show oil.

STEPHENS COUNTY—T 1n, R 7w, Sec. 2, Stahl & Burris' Jefferson 1, sec ne nw, coring sand 2746 ft.

COTTON COUNTY—T 1s, R 11w, Sec. 34, Shasta Oil Co.'s Indian 1, nec, drlg 180 ft.

STEPHENS COUNTY—T 1s, R 7w, Sec. 12, Ilsing, Russell & Nance's Houston 1, nec sw sw, sand 2328-35 ft, show oil, plugs drilled hf salt water to swab.

KIOWA COUNTY—T 2s, R 16w, Sec. 6, Landfair's 1, sec sw se, 2535 ft, sd.

COTTON COUNTY—T 2s, R 12w, Sec. 31, Pearce & Brown's Heitzler 1, sec nw, sd 2380 ft.

TILLMAN COUNTY—T 3s, R 18w, Sec. 29, Dixie Oil Co.'s Harrison 1, nec nw, sd 3092 ft.

COTTON COUNTY—T 3s, R 10w, Sec. 11, E. J. Stumpf's Jones 1, nwc ne, location.

STEPHENS COUNTY—T 3s, R 8w, Sec. 26, E. J. Stumpf's Simmons 1, swc, drlg 1000 ft.

COTTON COUNTY—T 4s, R 12w, Sec. 16, Guiler & Dyson's Thomas 1, sec sw, sd 2127 ft.

JOHNSTON COUNTY—T 1s, R 7e, Sec. 29, Smitty-Kinsley's Lane 1, sec nw, sd 1306 ft.

CARTER COUNTY—T 4s, R 2e, Sec. 32, Tex-Okla Drlg Co.'s Anderson 1, sec ne se, sd 250 ft. T 5s R 3w, Sec. 19, Devonian Oil Co.'s Myer 1, nwc se, drlg 2831 ft.

BRYAN COUNTY—T 9s, R 9e, Sec. 36, W. J. Endicott's Craig 1, c nw ne, sd 1050 ft.

MOUNTAIN STATES

COLORADO

ARCHULETA—Juanita Oil Co.'s Harvey 1, sw 4-23n-3w, stand 735 ft., due to bad weather.

BENT—Marland Oil Co.'s Pipe Springs 1, se 27-29s-49w, sd for winted 3987 ft.

ELBERT—Progressive Oil & Land Co.'s Pease 1, sw 27-10s-60w, spdg 50 ft.

JACKSON—Producers & Refiners' State 1, ne 2-6n-81w, sd for winter 1900 ft.

JEFFERSON—Ruby Hill O. & G. Co.'s Braden 1, se 14-4s-69w, dr 862 ft.

LAS ANIMAS—Parker Club, Kinney-Coastal 1, se 4-28s-64w, dr 1356 ft. Oklahoma-Colorado O. & G. Co.'s Doherty 1, sw 32-34-60w, dr 621 ft.

LARIMER—Barrows et al., 7-11n-64w, sd 2000 ft.

LA PLATA—Royal J. & R. Co.'s Red Mesa 1, 27-33n-12w, sd 650 ft, bad roads.

LINCOLN—Kelley Oil Co.'s State 1, ne 36-14s-57w, fsg 1540 ft, oil and gas showing.

MESA—Peerless Oil Co's Hoel 1, ne 23-8s-104, td 2058 ft, water line frozen. Parish & Langston, D. & R. G. Western's 1, nw 23-1s-1w, spd 20 ft.

MORGAN—Badger Creek O. & G. Co., Kent 1, sur 2-50n-10, sd 800 ft.

MOFFAT—Ohio Oil Co.'s State 1, 16-12-100, dr 3360 ft. McLaughlin et al's Wms 1, 2-3n-91w, dr 3100 ft. McCormick et al's Sales 2, se 28-4n-92w, spd to 15 ft, and sd for the winter.

MONTROSE—Uncompaghre O. & G. Co.'s Colorado Title & Trust Co. 1, 27-50n-10w, dr 1477 ft.

PUEBLO—Rozella Oil Co.'s Shaw 1, nw 3-22s-63w, run cas, td 1190 ft, 800 ft oil stand in the hole.

RIO BLANCO—White Eagle O. & R. Co.'s Forsham 1, sw 9-2s-86w, sidetr lost bit, td 519 ft.

YUMA—Ethnyre Synd., sw 7-2s-43, td 1475 ft, 12½-inch pipe stand cement.

WELD—Platte Valley Pete Corp.'s Patterson 1, sw 24-6n-61w, sd 4180 ft.

NEW MEXICO

CHAVES—Snowden & McSweeney's Merchant 1, ne 27-15s-23e, dr 3710 ft. R. E. Neal et al's Russell 1, 21-14-25e, dr 1150 ft. Warman et al's 1, se 15-12s-24e, dr 570 ft. Transcontinental's Robert 1, 1-14s-28e, dr 300 ft.

DE BACA—Matador Oil Co.'s State 1, sw 6-4n-20e, straight hole 630 ft. McAdoo's 1, ne 16-1s-27e, ready to resume, co at 4190 ft. Transcontinental's McWhorter 1, 6-35-22e, 8¼-inch cement at 3125 ft.

GUADALUPE—Hanchett Oil Co.'s 2, 14-8n-24e, dr 1799 ft.

LEA—Midwest's Capps 31, sw 3-19s-38e, rigged; Midwest's Farnsworth 19, 12-26-37e, dr 3912 ft; Midwest's Farnsworth 13c, 13-26-36e, dr 1410 ft. Marland's Lynn 1, 26-23-36, dr 3965 ft; Marland's Reed 1, 22-20s-36e, dr 3505 ft; Marland's Meyers 1, 26-20s-37e, dr 3835 ft; Marland's Warren 1, 29-20s-36e, dr 3460 ft; Marland's Lockhart 1, 31-21s-36e, dr 3870 ft, building storage. Gypsy Oil Co.'s Mattern 1, 24-21s-36e, dr 815 ft. Exploration Co.'s Record 1, 26-19s-35e, td 4556 ft. Morton et al's State 1, ne 32-11s-38e, dr 1450 ft. Texas' Lynch 1, se 34-20-34, ur below 1120 ft; Texas' Sheppard 1, ne 6-26s-37e, spray oil 3230 ft, tools lost; Texas' Humphreys 1, nw 18-20s-32e, location; Texas' Moberly 1, se 17-26s-37e, fsg 3540 ft. Curtis Dr. Co.'s Nixon 1, 22-18s-34e, sd 1150 ft. Cranfill & Reynolds' Wilson 1, ne 23-25s-36e, ready to spud. Skelly Oil Co.'s Joiner 1, se 26-25s-36e, wtg for pipeline connections. Maljamar O. & G. Corp.'s Pearsall 2, 30-17s-32e, dr 4330 ft. Empire Gas & Fuel Co.'s State 1A, nw 12-21s-34e, dr 3960 ft. Texas Pacific Coal & Oil Co.'s State 1, sw 22-23s-35e, dr at 1925 ft. Prairie O. & G. Co.'s Slattery 1, ne 22-22s-34e, location. Henderson et al's McDonald 1, se 18-20s-34e, cas 1515 ft. Vacuum Oil Co.'s 1, 14-17-34, dr a water well. Bordages et al's Hughes 1, 27-19s-32e, dr deepera 4040 ft.

McKINLEY—J. W. Halsell's Santa Fe 1, 17-81n-9w, dr 1032 ft.

ROOSEVELT—J. T. Keegan et al's Pepper 1, 6-1s-36e, ready to spud. Smith & Sloan's Lovern 1, se 4-3s-35, ready to spud.

SAN JUAN—Continental Oil Co.'s Munoz 17, 2-29-19, dr 6496 ft. Dorothy Oil Co., 29-30-9, sd 712 ft. Huerfano Oil Co.'s Wiltbank 1, 25-29-11, td 800 ft. San Juan Pete Co.'s 1, 9-29-13, sd 2950 ft. Kirtland Dr. Co.'s Hunt 1, 10-29-15, td 450 ft. Kutz Canon O. & G. Co.'s Day 1, 29-28-11, dr 700 ft. Blackrock Oil Co.'s 1, sw 11-25s-13w, sd temp 1550 ft. Iowa Oil Synd.'s Viles 2, 28-29-11, recem. at 830 ft. Angel Peaks Oil Co.'s Kutz Canon 1, 11-28n-11w, dr 2000 ft. Great Mesa Oil Corp.'s Roderick 1, sw 11-22n-14w, s d 215 ft. Milwaukee-N. M. Synd.'s Beardsley 1, 30-28n-11w, sd 1100 ft. Childers D. & P. Co.'s Westwater 2, nw 24-31-16w, fsg liner 2075 ft.

SAN MIGUEL—E. Adams et al's Deason 1, 14-15n-16e, sd 1235 ft. Benedict-Wilson's 1, ne 25-17n-16e, sd 800 ft.

SOCORRO—Arnold et al's 2, ne 13-63-10w, run 6⅝-inch at 1400 ft.

TORRANCE—Bluhall O. & G. Co., 20-6n-10e, sd 1735 ft. Hall et al's Pinos Wells 1, sw 25-3n-13e, stand 400 ft. Sinnock et al's Kutchin 1, ne 13-7n-7e, spd 100 ft.

VALENCIA—Rio Puerco Oil Co., N. M.-Ariz. Land Co.'s 2, nw 13-6n-2w, wait pipe 3145 ft. Acme Oil Co.'s N. M.-Ariz Land Co. 1, 26-6n-3w, ur 6⅝-inch, td 3650 ft.

UTAH

(Operations in Utah continue at almost a standstill due to the continued bad weather and extreme cold.)

GRAND COUNTY — Utah Southern's Salt Valley 1, 13-23-21, will deepen from 3001 ft when No. 1A Shafer is completed. Utah Southern's Shafer 1A, 36-26-20, sd 2700 ft.

DUCHESNE — Utah Southern Oil Co.'s Farnsworth 1, 29-4-1, dr 2892 ft.

WAYNE—Phillips Pete Corp.'s 1, 16-27-16, fsg 4575 ft.

WYOMING

BIG HORN—P. R.'s 3, 24-56-98, sd 27-8 ft. Prairie O. & G. Co.'s Chilcote 1, 35-56n-98w, fsg ur lugs 2580 ft. P. & R.'s South Frannie 1, 7-57-97, prep to run pipe at 1950 ft. J. E. Scanlon et al's 1, 19-51-92w, try form so at 2600 ft.

CARBON—P. & R.'s 2-19-88, sd 4003 ft.

FREMONT—P. & R.'s Muskrat 2, nw 1-33n-92w, location. Gates & Holman, 6-33-94, dr 325 ft. Kinney-Coastal's 1, 22-3n-1w, dr 500 ft.

HOT SPRINGS—Texas Prod. Co., sd 23-45n-100w, cem 15½-inch at 1214 ft.

LINCOLN—Midwest Refining Co.'s Waterfall 1, 35-22-115, dr 2520 ft.

PARK—California Exploration Co. and P. & R.'s Pitchfork 1, 12-48n-102w, cem 20-inch at 225 ft. Midwest's Rosenburg 36, 25-58-98, dr 790 ft; Midwest's Kirk 1, se 23-58-98w, co 1420 ft. Cody Pete Co.'s 1, ne 4-51n-102w, dr depth unknown. Oregon-Wyoming Oil Co., 30-52n-101w, set 6⅝-inch at 1030 ft. Ohio Oil Co.'s Pulley 1, 27-53-101, try to so water 4780 ft.

SWEETWATER—Prairie O. & G. Co.'s Tucker 1, 18-13-99, transferred to Mtn Sts Fuel Supply, td 2480 ft. Ohio Oil Co.'s Humphreys 1, 2-12-101, dr bel 2240 ft.

SUBLETTE—California Co.'s Wyss 1, 12-32n-115w, 1449 ft. California Co.'s Buchell 1, 11-29-115, sd 2503 ft, hauling fuel.

UINTA—California Co.'s U. P. 1, 7-17-118w, dr 2739 ft.

MONTANA

(Montana operations have been brought to an almost complete shutdown by the very cold weather and continued blizzards. Temperatures have remained from 30 to 40 degrees below zero in the northern part of the state where the most interesting wildcat operations are under way.)

BLAINE—Ohio Oil Co.'s Winngert 1, 3-34n-32e, sd 2700 ft.

BROADWATER—Swoboda et al's Davis 1, 37-6n-2e, td 200 ft.

CARBON—Ohio Oil Co.'s Northern Pacific 1, 11-7s-21e, fsg tools 4558 ft.

GALLATIN—California Co.'s Ringling 1, 35-5n-7e, sd 600 ft.

PONDERA—Trapp Synd.'s Hover 1, se 35-28-3w, dr 2210 ft.

SWEETGRASS—Shoshone Cons.' 1, 23-2n-15w, reported swbg 4056 ft.

TEXAS GULF COAST

AUSTIN COUNTY—Humble's R. Dietrich 2, Raccoon Bend, dr 1026 ft sandy lime; Hardy 3, Raccoon Bend, ru; A. Grawunder C-1, Raccoon Bend, prep to bail, td 3388 ft; Sherrill 1, Raccoon Bend, dr 1636 ft shale and lime; J. C. Walton 2, Raccoon Bend, completed for 300 bbls at 3275 ft; Urban 2, Raccoon Bend, waiting on rig; Urban 3, Raccoon Bend, dr 1838 ft sandy shale; Roy Thompson 3, Raccoon Bend, dr 212 ft rock; J. W. Wilson 1, Raccoon Bend, dr 1998 ft sandy shale; E. Kearns 2, Raccoon Bend, dr 1575 ft shale; E. B. Wilson 3, Raccoon Bend, dr 480 ft shale; E. Ueckert 1, Raccoon Bend, dr 1001 ft; Sanders 2, Raccoon Bend ru; E. Grawunder D-1, Raccoon Bend, ru.

BRAZORIA COUNTY—Meyer et al's Davidson 2, Clemens Dome, lcn. Shell Pet. Corp.'s Allen 5, Allen Dome, dr 4900 ft shale; Reese 3, Allen Dome, cor shale at 4514 ft; Randon 1, Allen Dome, abn 5033 ft. Humphrey's Corp.'s Bryan 1, Bryan Heights, lcn. Empire G. & F. Co.'s Brock 2, Stratton Ridge, dr 3350 ft lime and shale.

CHAMBERS COUNTY—Pure Oil Co.'s Mayes 1, Lost Lake, dr 1245 ft sand and lime; Lost Lake 2, Lost Lake, tested salt water at 3565 ft, dr 3775 ft gbo. Gulf's Wilborn 1, Hankamer, dr 4610 ft gbo. Mills Bennett Prod. Co.'s Smith 2, Barbers Hill, e side, drk; Kirby 2, Barbers Hill e side, dr 5851 ft hard sand; E. W. Barber 1, dr 869 ft gbo. Mills Bennett-Republic Prod. Co.'s Means 1, Barbers Hill, e side, dr 3963 ft shale. Humphreys Corp.'s Barber 1, Barbers Hill, e side, dr 5068 ft sandy lime; Kirby B-6, Barbers Hill, e side, tested salt water at 5809 ft. Mike Kouri's Shaw 1, Barbers Hill, e side, waiting on orders. Joe Bashara's Tarbutton 1, Barbers Hill, e side, stdg 4747 ft. Sun Oil Co.'s Chambers County Agri. Co. 1, sw side field, Barbers Hill, dr 1847 ft gbo. Gulf's Fisher Fee 1, Barbers Hill, sw side, dr 1900 ft gbo. Cedar Bayou Oil Co.'s Fitzgerald 1, Barbers Hill, sw side, cavity at 870 ft. Yount-Lee Oil

Co.'s Chambers Co. Agricul. Co. 2, Barbers Hill, sw sider dr 2908 ft sandy shale; Chambers Co. 3, Barbers Hill, dr 2120 ft sandy shale. Richardson 3, Barbers Hill, sw side, abn cap rock 2217 ft; Richardson 4, Barbers Hill, sw side, ru.

COLORADO COUNTY—The Texas Co.'s Kveton 1, Cat Springs, dr 1304 ft sandy shale. Shell Pet. Corp.'s Neundorff 1, 1 mi ne Bernado, ru. Humble's Herder 1, Altair, dr 500 ft. Merrett et al's Zverck 1, 2 mi e Ellinger.

FORT BEND COUNTY—Sun Oil Co.'s E. C. Farmer 4, Boling, td 3895 ft; Rodgers 2, Boling, dr 3986 ft shale. The Texas Co.'s Dippel B-1, Boling, dr 3215 ft lime; Dippel A-1, Boling, fsh 3590 ft; Pleasants 1, Boling, ru on new lcn; E. C. Farmer 2, Boling, dr 1509 ft sand and boulders; Wheat 4, Big Creek, fsh for drill stem at 3643 ft. Gulf's Moore 18, Moore's Field, dr 2895 ft gbo and lime; Wolf 14, Long Point, dr 590 ft sand and shale. Boling Dome Oil Corp.'s Armstrong 1, Boling, dr 3975 ft sand. Humble's Brazos Farm 2, Sugarland, sand and boulders; Brazos Farm 3, Sugarland, dr 1501 ft rock; Brazos Farm 4, Sugarland, ru; Brazos Farm 5, Sugarland, drk; Sugarland Industries 5, Sugarland, dr 2605 ft hard sand; No. 6, drk; Deathridge 2, Sugarland, completed for 500 bbls at 3760 ft; Nelson 1, Sugarland, completed for 250 bbls at 3442 ft; Nelson 2, Sugarland, ru; Camp 2, Sugarland, waiting on cement to set at 3324 ft; Bankers Mtge. 1, Sugarland, dr 829 ft Gulf Prod. Co.'s Deathridge 1, Sugarland, lcn; Sugarland Industries 1, Sugarland, lcn. South Tex. Exploration Co.'s Hartfield 1, Needville, coring 5610 ft sand.

GALVESTON COUNTY—Long et al's Irvin & Bishop 1, 2 mi s Dickinson, sd 4322 ft. Republic Prod. Co.'s Lobit 1, 1 mi nw Dickinson, reset surface cas, td 4070 ft.

HARDIN COUNTY—Guedry Drlg. Co.'s Guedry 1, 3 mi s Batson, drk.

HARRIS COUNTY—Torsen et al's Stewart 1, 4 mi sw Genoa, sd 691 ft. Hunt et al's Lobit 1, 4 mi n Goose Creek, sd 2145 ft. Humble's Simms-Smith 75, Goose Creek, dr 1525 ft gbo; Warren 5, Hockley, dr 2546 ft shale; Minnetex 1, Mykawa, td 5497 ft. Paxton et al's Brubacker 1, 1 mi ne Clodine, sd 1125 ft. South Tex. Pet. Co.'s Hicks-Higbee 1, near Almeda, dr 3735 ft gbo and lime; Morris 3, se part of Humble field, dr 3559 ft sand. The Texas Co.'s House 22, Humble, waiting on cement to set, td 4203 ft; Stevenson 39, Humble, dr 850 ft gbo. Brains et al's Lentze 1, 4 mi s Tom Ball, sd 1120. Baldwin & Neyland's Kitzman 1, 2 mi n Cypress, cored shell, lime, gbo and sand at 3350 ft.

JACKSON COUNTY—The Texas Co.'s Moore 1, Edna, dr 3251 ft shale.

JEFFERSON COUNTY—Deep Test Oil Corp.'s Faith McFadden 1, 1¼ mi e of Spindle Top production, dr 3475 ft sand. J. W. Farhar et al's Rohwedder 1, 5 mi ne Beaumont, prep to resume dr, 2075 ft, td. Beaumont Oil Co.'s Tyrrell 1, 2 mi w Brooks, drk. Westbury Synd.'s West 1, 1 mi ne Westbury, fsh 2740 ft. River Oil Co.'s Ship Channel Ld. Co. 1, 2 mi se Beaumont, sd 940 ft. Bleakie Oil Co.'s Tollivar 1, 2½ mi nw Voth, dr 1560 ft sand. The Texas Co.'s Pipkin & Davis No. 1, Big Hill, dr 4869 ft sand and shale. Shell Pet. Corp.'s Heisig 1, n Hampshire, drk. Yount-Lee Oil Co.'s Nona Mills 1, 5 mi s Beaumont, dr 1808 ft gbo. Gulf's Thomas 11, Fannett, ru; Bordages A-7, Fannett, ru.

LAVACA COUNTY—The Texas Co.'s Russeck 1, 6 mi s Ezell, dr 2827 ft gbo and lime.

LIBERTY COUNTY—Barlow et al's Minchdliff 1, 2½ mi ne Cleveland, sd 2215 ft. Kouri et al's Campbell 1, 6 mi s Cleveland, sd 2000 ft. Big Dome Interests' Finley 2, 3 mi nw Hardin, drk. The Texas Co.'s Davis 2, Davis Hill, 1906 ft gbo. Humble's Sterling 4, Moss Bluff, drk. Sun Oil Co.'s Kovleika 1, N. Dayton, dr 4570 ft rock. Union Explo. Co.'s Esperson 2, 2 mi s Sheeks, dr 3330 ft gbo. Tan Bay Oil Co.'s Christian 1, 10 mi n Hardin, sd 1115 ft.

MATAGORDA COUNTY—Crossland et al's Hawkins 1, Shepherds Mott, dr 3486 ft rock. Rycade Oil Corp.'s Hudson-Humble 4, Markham, drk. Dr. P. S. Griffith's Culver 1, e Citrus Grove, sd 3215 ft; Baer 1, 1½ mi n Gulf Hill, dr 1828 ft shale.

ORANGE COUNTY—Veteran Oil Co.'s Reed 1, 2 mi se Orange field, sd 2072 ft. The Texas Co.'s Kuhn 1, 4 mi e Spindle Top, td 93 ft.

WALLER COUNTY—Dixie O. & G. Co.'s Brazos River State 1, San Felipe, sd 500 ft. The Texas Co.'s Young 1, 3 mi e Raccoon Bend, ru.

SOUTH LOUISIANA

ACADIA PARISH—E. F. Simms' Clement 1, Jennings, will sdtr at 2970 ft, td 3872 ft; Clement 2, Jennings, sd 3840 ft; Grace von Schuler 1, Jennings, dr 4607 ft; Jennings Oil Co. 1, Jennings, sd 3545 ft; Cockrell 1, Jennings, sd 4330 ft; Cockrell 2, Jennings, dr 3170 ft lime.

ASCENSION PARISH—Gulf's United Lands Co.'s 11, Sorrento Dome, sdtr at 2025 ft, td 2090 ft; Belle Helene Sugar Co. 1, Darrow, spudded. Triumph Oil Corp.'s J. D. Lacey et al 2, 3 mi se Sorrento, dr 1750 ft shale. Burnside Oil Co.'s Roberts 1, sd 920 ft. Baton Rouge Pet. Co.'s Liotta 1, sd 1000 ft.

CALCASIEU PARISH—Union Sulphur Co.'s Fee 736, Sulphur, dr 4710 ft hard sand; Fee 739, Sulphur, dr 2155 ft rock; Fee 740, Sulphur, dr 5314 ft gbo; Fee 741, Sulphur, dr 2095 ft shale and sand. J. W. Watson et al's La. Land Co. 1, Sulphur, sd 5100 ft.

CAMERON PARISH—Pure Oil Co.'s Yount-Lee 8, Sweet Lake, set screen at 4475 ft, td and now washing; Yount-Lee 7, Sweet Lake, set liner above screen, now bailing, td 4594 ft. Calcasieu Oil Co.'s Doiron 5, E. Hackberry, dr 3400 ft rock; Watkins 13, E. Hackberry, dr 3700 ft rock. The Texas Co.'s Calcasieu Lake B-4, E. Hackberry, ru; Calcasieu Lake A-3, S. Calcasieu Lake, driving piling. Rycade Oil Corp.'s Gulf Land 2, Hackberry, dr 525 ft sand and gravel. Yount-Lee Oil Co.'s Sanner 1, Hackberry, lcn; R. Vincent 1, Hackberry, abn in heaving shale at 4150 ft. Cameron Oil Co.'s Duhon 3, Hackberry, dr 2520 ft gbo. Cameron Oil Co.-Rycade's Gulf Land 1, Hackberry; Noble Oil Co.'s Ellender 3, Hackberry, Cherokee Oil Co.'s Duhon 1, Hackberry, sd 880 ft. Moon Oil Co.'s Sanner 2, Hackberry, ru. Sun Oil Co.'s Sanner 1, Hackberry, ru; Sanner 2, Hackberry, lcn; Vincent 1, lcn. Chas T. Madison's Duhon 1, Hackberry, td 355 ft. Federal Pet. Co.'s Koough 1, 2, and 3, Hackberry, ru. Shell's Watkins 6, Black Bayou, dr 3092 ft sand; Watkins 7, Black Bayou, abn 940 ft; Watkins 8, Black Bayou, moving in material.

IBERIA PARISH—The Texas Co.-La. Land & Explo. Co.'s Vermilion Bay A-3, Vermilion Bay, dr 4245 ft shale. Gulf's Fannie Kling et al 3, Loreauville, dr 3322 ft shale and lime; Morsi Co. et al 1, Loreauville, dr 200 ft shale. Jefferson Lake Oil Co.'s Lake Peigneur 1, Jefferson Island, dr 800 ft.

IBERVILLE PARISH—Shell's Wilbert 3, White Castle dome, dr 3537 ft shale and lime. Standard of La.'s Wilbert 2, Bayou Blue dome, Sec. 74, wtg for drk material; Wilbert 3, Bayou Blue dome, lcn; Schwing 1, Bayou Blue dome, dr 3635 ft sand; Schwing 2, Bayou Blue dome, Sec. 74-9s-10e, bldg drk. Union Sulphur Co.'s Schwing 3, Bayou des Glaise dome, dr 3675 ft rock.

JEFFERSON DAVIS PARISH — Vacuum Oil Co.'s Earl 1, Roanoke, set cas at 950 ft; DeVilbiss 1, Roanoke district, dr 5200 ft sticky shale.

LA FOURCHE PARISH—Gulf's Stark 9, Thibodaux, dr 1342 ft cap rock. Union Sulphur Co.'s Dibert-Stark-Brown 1, Thibodaux, dr 900 ft gbo; Dibert-Stark-Brown 2, Thibodaux, lcn.

PLAQUEMINES PARISH—Gulf's Morris & Rose 1, Spanish Pass, 5 mi sw Venice, ru. The Texas Co.'s Garden Island Bay 1, 15 mi se Venice, bldg drk.

POINTE COUPEE PARISH—Miller et al's Kornbacker 1, sd 1925 ft. Freun et al's La Cour 1, ru and standing.

ST. JAMES PARISH—U. S. Mineral Dev. Co.'s Reynaul Co. 1, sd 1720 ft.

ST LANDRY PARISH—The Texas Co.'s Botany Bay Fee 1, Port Barre dome, will set screen, well came in at 3763 ft making 800 bbls 23 gravity pipe line oil, but quit flowing.

ST. MARTIN PARISH—Rycade's State 3, Bayou Bouillon, td 960 ft; Bayou Bouillon Fee 6, will pull screen, td 2888 ft; Bayou Bouillon Fee 7, drk; Bayou Bouillon Fee 8, dr 1065 ft gbo; Atchafalaya Fee 3, Bayou Bouillon, td 5163 ft salt; Atchafalaya Fee 5, Bayou Bouillon, drk. Ohio Oil Co.'s Martin et al 3, Hager dome, dr 4265 ft shale; Burke 3, Hager dome, lcn. The Texas Co.'s St. Martin Land Co. 1, Hager dome, moving in. Yount-Lee Oil Co.'s La. Pet Co. 4, Anse la Butte, td 2675 ft.

ST. MARY PARISH—J. Dannenbaum et al's Le Blue 1, Charenton, sd 3015 ft.

ST. TAMMANY PARISH—Pearl Oil Corp.'s Fritsche 1, Slidell, td 2020 ft.

TANGIPAHOA PARISH—Tanli Oil Co.'s Weinberger 2, sd 4050 ft. Joan Dev. Co.'s Lake Superior Piling Co. 1, td 220 ft.

TERREBONNE PARISH—Southern Gas Co.'s Peoples Sugar Co. 1, Houma, sd 2287 ft. The Texas Co.'s Lake Barre 1, Sec. 37-21s-19e, moving in; Lake Pelto B-1, Sec. 8-23s-18e, moving in; Four Isle Bayou B-1, moving in; Timbalier Bay A-1, driving piling; Bay Coon Road B-1, Sec. 17-22s-18e, moving in; Dog Lake Bayou A-1, Sec. 6-22s-16e, moving in.

EAST TEXAS

ANDERSON COUNTY—Humble's Neches River 1, Boggy Creek, waiting on cement, 1509 ft; Lizzie Smith 3, Boggy Creek, preparing to plug back from 3735 feet after testing water; T. H. Jones B-1, Boggy Creek, dr 3404 ft chalk; J. Gouger 1, Boggy Creek, drk; Purvey 1, Boggy Creek, drk.

CHEROKEE COUNTY—Humble's Earl & Ragsdale 4, Boggy Creek, dr 2553 ft shale; Elliott & Clark B-1, Boggy Creek, drk.

BOWIE COUNTY—Hooks O. & G. Co.'s Rosenberg 1, King sur, temp abn td 3086 ft.

CAMP COUNTY—Rogers et al's Enfelt 1, Montgomery sur, dr 1949 ft.

CASS COUNTY—Davis & Pigg's Ed Lambert 1, Lambert sur, sd wo 1952 ft.

MARION COUNTY—Trimount Pet. Co.'s Mebane-Stiles A-1, Gupton sur, dr 600 ft.

RED RIVER COUNTY—D. M. Buffington's Hoosier 1, Hughart sur, dr 1550 ft. Shad Harper's Garland 1, Jos. Wagley sur, sd wo 1862 ft. Johnson Pet. Co.'s Randolph 2, Dean sur, sd wo 1440 ft.

SHELBY COUNTY—Chapparral Oil Co.'s Holt 2, Matthew Moore sur, sd wo 3004 ft. Gulf Ref. Co.'s Caraway 1, Patterson sur, gray lime 3050 ft.

NORTH LOUISIANA

BIENVILLE PARISH — W. P. Wallace's State 1, 16-16-10, dr 1850 ft.

BOSSIER PARISH — Big Ben Oil Co.'s Stewart 2, 15-18-12, sd wo 1300 ft. Nell & Lanier's Biedenharn 1, 23-21-14, sd 50 ft. Walker et al's Antrim 1, 28-22-14, sd 2985 ft. John F. Woodman's Bolinger 1, 9-22-11, dr 900 ft. Magnolia Pet. Co.'s B. M. Cook 1, 2-22-11, dr lime 1877 ft. Sallie Coyle 1, 2-22-11, dk.

CADDO PARISH—D. C. R. Oil Co.'s Hunter Est. 1, 17-19-14, dr 1665 ft.

CATAHOULA PARISH—Lochnager O. & G. Co.'s Taliaferro 1, 26-9-6e, sd 900 ft.

CLAIBORNE PARISH—Dixie Oil Co.'s Gilbert 1, 27-21-5w, dr 5014 ft. El Dorado Chief Oil Co.'s Baker 1, 26-20-7, dr chalk 2540 ft. Smitherman & McDonald's Miller 1, 17-23-8, dr lime 4640 ft.

DE SOTO PARISH — Benedum & Trees' Nicholson 1, 2-15-14, rig up. Mahoney 1, 22-14-12, dr 150 ft. P. J. Becker's Tull 1, 23-12-15, dk. Benson O. & G. Co.'s Jackson 1, 3-10-13, rig up. Luke Case, Tr.'s Boatright 1, 3-10-13, re-bldg dk, td 1810 ft. Carlton Drlg Co.'s Stephen's 2, 12-11-16, dr 1975 ft. R. O. Roy's Sample 1, 1-13-14, dr chalk 1885 ft. Thorn Oil Co.'s Burford 1, 22-14-14, sd 3020 ft. Longstreet Synd.'s Ramsey 1, 33-13-16, sd 2800 ft. (formerly carried Warren & Carruthers.)

EAST CARROLL PARISH—Palmer Corp.'s Mitchiner 1, 8-19-11e, dr igneous rock 2700 ft.

FRANKLIN PARISH—Davis et al's Moore 1, 12-11-6e, sd wo 1430 ft.

GRANT PARISH—Carter & Collins' Ball Lbr. Co. 1, 29-7-1w, set 10-in cas 140 ft. Hardtner & Tannehill 1, 9-6-1w, dk.

LINCOLN PARISH—V. E. Shaw's Voss 1, 1-20-3w, mudding off fresh water 340 ft.

MOREHOUSE PARISH—Rainbow Oil Co.'s Louisville Cooperage 1, 33-22-8e, dk. Woodley & Collins' Harp 1, 22-22-7e, rig up.

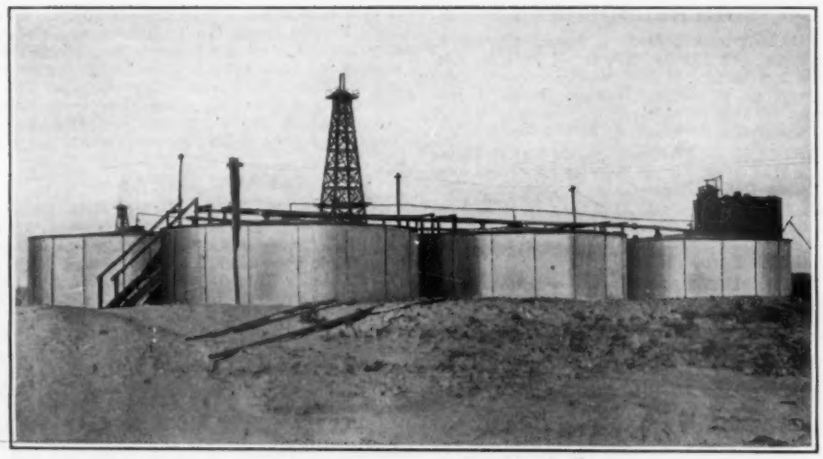
NATCHITOCHES PARISH—Robeline O. & G. Co.'s Cassady 1, 7-8-9w, dr hard lime 2667 ft. S. D. McDaniel's Clarke-Morse Lbr. Co. 2, 23-5-6w, rig up.

OUACHITA PARISH—Ouachita Nat. Gas. Corp.'s D'Arbonne B-2, 25-19-2e, sd 3349 ft. Phillips et al's School Fee 1, 16-16-4e, dr 3120 ft.

RAPIDES PARISH—G. E. Silberson's Willemach 3, 13-5n-4w, sd 2250 ft. Glenmora Pet. Co.'s Fee 1, 1-2n-2w, sd 3850 ft.

RICHLAND PARISH—Richland Operating Co.'s S. R. Humble 1, 30-16-7e, rig up. S. C. Wilson's Buie 1, 17-15-7, sd 50 ft.

SABINE PARISH—R. L. Gay's Bowman-Hicks 2 14-7-14, arr dr plug 1997 ft, to 2007



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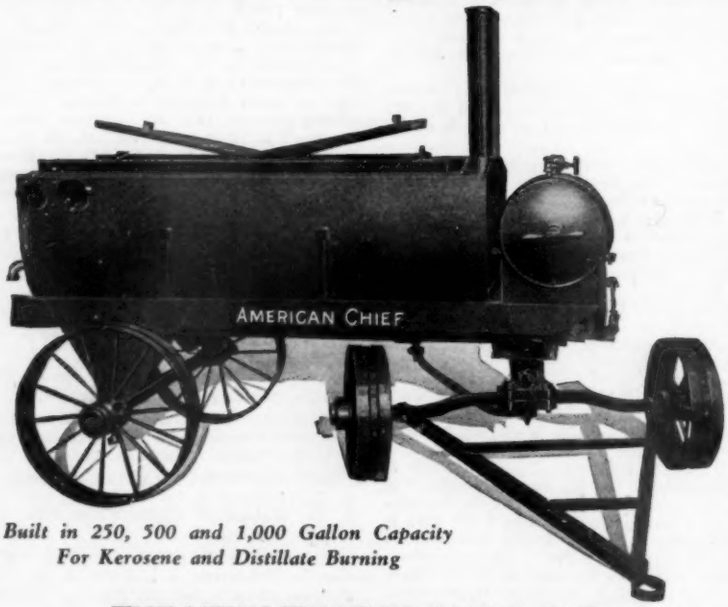

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ft. Sabine Lbr. Co. 1, 13-7-14, coring br shale streaks oily sand 2486 ft. W. J. Garnier's Bowman-Hicks 1, 16-7-12, sd 625 ft.

TENSAS PARISH—Enochs et al's Curry 1, 39-11-12e, sd 3583 ft.

UNION PARISH—Sundby et al's Security Trust Co. 1, 6-23-1e, dr 500 ft. G. E. Carmatte's Tugwell 2, 21-22-1e, repr rig, td 1700 ft. Carter & Wingfield's Clark A-3, 8-23-1e, dk. Hudson 2, 7-23-1e, sd wo 2278 ft. Hudson 3, 7-23-1e, sd 2278 ft. Security Trust 2, 7-23-1e, lcn. H. C. McDonald's Union Sawmill 2, 18-23-1e, sd 1500 ft.

WEBSTER PARISH — Nemours Corp.'s Munn 1, 1-22-10, lcn. J. W. Clark, Tr.'s Mayfield 2, 20-23-9, dr 1450 ft. Magnolia Pet. Co.'s Atkins 1, 4-22-9, lcn. H. H. Branton 3, 6-22-9, cemtd 8¼-in cas 2669 ft. Denman 1, 1-22-11-1500 ft sw show oil in hole td 2710 ft. Harry Morris' Lewis 1, 15-23-9, sd wo 2902 ft. John F. Woodman's Boyd 1, 3-22-11, dk.

ARKANSAS

Completions

Company, Well and Location	Initial Production Bbbls	Depth
UNION COUNTY—		
Gulf Ref. Co., Gaddy 2, 30-17-14....	¶50	2859

ASHLEY COUNTY—Atlantic O. P. Co.'s Bledsoe 1, 20-15-7, rig up wo 2554 ft. Texas Co.'s Keiffer 1, 11-18-4, tog gas sand 2801 ft tested sw through ds 2801-2809 ft dr 2820 ft.

CALHOUN COUNTY — Joe Hurley's Ark. Lank & Timber 1, 29-16-12, dr 2781 ft sandy lime.

CLARK COUNTY—Wm. Henry, Tr's Clark 1, 34-9-21, sd 1385 ft.

CHICOT COUNTY—W. S. Smith's Meyer 1, 19-19-2, sd wo 850 ft. Joe Crawford's Cashion 1, ds stuck td 2330 ft.

COLUMBIA COUNTY—G. W. Dawley et al's Fullenwider & Kitchen 1, 12-17-22, sd wo 2847 ft.

DALLAS COUNTY — Robt. H. Dedman's Hillman 1, 20-10-13, temp abn td 1145 ft.

DREW COUNTY—Ohio Oil Co.'s Jerome Lbr. Co. 1, 13-15-4, dr 2020 ft.

FAULKNER COUNTY—Gold Creek O. & G. Co.'s Stermer 1, 17-4-13, temp abn td 3462 ft.

FRANKLIN COUNTY—Ozark Nat. Gas Co.'s McElroy 1, 15-8-27, lcn.

GARLAND COUNTY—H. H. Given's Garrett 1, 1, 1-13-19w, td tr cable tools 2800 ft.

GRANT COUNTY—Jones & Watkins' Meek 1, 5-4-11, sd 1400 ft.

JOHNSON COUNTY—Ark. Nat. Gas Corp.'s Bynum 2, 12-10-24, setting 10-in cas td 1515 ft. McPherson 1, 10-10-24, dr 1940 ft.

LITTLE RIVER COUNTY—Grote et al's Allen 1, 21-12-13w, sd 2941 ft.

LOGAN COUNTY—Ark. Nat. Gas Corp.'s W. H. Parks 1, 26-8-24, 6⅝-in cas reset 3700 ft, dr 4100 ft.

MILLER COUNTY—E. A. Martin, Tr.'s Dale 4, 23-15-26, sd 3115 ft.

OUACHITA COUNTY—Little Fay Oil Co.'s Primm A-1, 24-15-16, set lin 32 ft br sand arr pump td 2072 ft. Goodwin 1, 13-15-16, cemtd 10-in cas 110 ft. McDonald Bros.' Wilson 1, 25-15-18, tested good show oil 2818 ft, set lin 2828 ft 1200 ft oil in hole will pump. Chas. McDonald's Wilson 1, 25-15-18, dr 2750 ft. Flaucher et al's Bucks 1, 7-15-17, rig up.

UNION COUNTY—La. Oil Ref. Corp.'s Manley 1, 15-15-19, rig up. Frank Foster et al's McDonald 1, 11-17-18, sd bad roads td 150 ft. Foster et al's Murphy Land Co. 1, 22-17-17, sd 1400 ft. J. O. Moore, Tr.'s Union Sawmill 1, 11-18-12, waiting on cemt to harden td 187 ft. Carter Bell et al's Terrell 1, 27-18-14, dr 2350 ft. Calgo Oil Co.'s Primm 1, 9-18-17, dr tested 3300 ft sw through ds 4223-4235 ft coring 4275 ft. J. P. Hawkins et al's Goodwin 1, 6-17-15, sd 1204 ft. McDonald Bros.' Mayfield 1, 29-19-15, sd wo 1990 ft. Frazier et al's Laney 1, 30-19-16, dk pat. Standard Oil Co. of La.'s J. R. Burns 5, 31-17-15, cemtd 6-in cas 2157 ft. Grimes Bros.' Hill 2, 7-18-14, rig up wo. J. C. Marcum's DeYambert 1, 5-19-4, sd 3101 ft. Gulf Ref Co.'s Gaddy 2, 30-17-14, 49,916,000 cu ft gas, 45 bbls cut oil td 2859 ft. T. J. Woodley 1, 6-18-14, coring hard gray lime 3540 ft.

KANSAS

BARBER COUNTY—Barbara Oil Co.'s Lytle 1, cnl ne ne sw, 12-33-13w, dr 4285 ft. Barbara's Blunk 1, c ne nw, 20-34-13w, dr 4815 ft. Rolands et al's Pickens 1, ne nw ne, 27-30-14w, sd 4223 ft. Allison & Fitzwilliams Morrise 1, c nw se se, 9-30-12w, rig.

BUTLER COUNTY—LaRobb et al's Bronsenger 1, ne se, 24-27-3e, ru.

CHASE COUNTY—Grisner & Fowler's Carson 1, ne ne, 9-21-7e, sd 3150 ft.

COWLEY COUNTY—Pyle & Sutter's Lindstrum 1, se ne, 9-35-4e, dr 3297 ft. Wakefield & Osborne's 1, ne, 18-30-5e. Producers Oil's Jones 1, c sw ne se, 31-26-2e, rig.

EDWARDS COUNTY — Amerada-Wilcox, Teansil 1, nw cor, 32-25-19w, dr 4370 ft. British-American Oil Co.'s McCarty 1, ne nw, 31-25-17w, fsh 2870 ft.

ELLIS COUNTY—Rush Oil Co.'s Gatewood 1, nw 4-15-20w, sd 1100 ft. Finney & Weimer, Freeman 1, nw se se, 24-15-20w, sp and sd. Empire's Wann 1, ne, 31-12-19w, dr 3740 ft. Phillips' Brull 1, c nw, 34-14-17w, sd 3090 ft. Phillips' Schmeidler 1, nw cor, 20-12-17w, dr 1685 ft. Labette Oil Co.'s Urbank 1, ne nw nw, 19-15-16w, 6-in set 3755 ft. Cosby et al's Robbins 1, sw nw, 15-14-16w, ru. Phillips' Johnson 1, sw ne, 9-13-19w, dr 865 ft. Derby & Empire's Krause 1, nw sw sw, 17-14-19w, dr 3860 ft. Davis & Hazlett's Weiland 1, nec 1-13-18w, 200 bbls 3004-14 ft. Phillips' Unknown 1, ne se, 12-13-16w, rig.

GREENWOOD COUNTY—P. H. Balieu's Bright 1, ne sw, 22-27-12e, sd 1210 ft.

HARPER COUNTY—Amerada's Mendiville 1, c se se, 24-34-6w, co 5353 ft.

HARVEY COUNTY — Margaret Gay Oil Co.'s Grouse 1, nw ne nw, 29-23-1w, dr 1255 ft. Helmerick & Payne's Lindamood 1, c sw ne sw, 2-22-1e, dr 1325 ft. Empire's Tangeman 1, c sw ne ne, 19-22-1e, dr 1810 ft. R. F. Garland's Cox 1, ne cor 27-24-1w, dr 2680 ft. Fisher & Lauck's Regier 1, nw ne, 17-23-2e, dr 1995 ft. Austin's Neiman 1, swc 21-24-2e, dr 3106 ft. Hartman & Skaer and White Eagle's Sooman 1, c nnw ne se, 26-24-1e, rig. Roth & Faurot's Bombrowsky 1, nwc, 26-22-1e, rig. Jolly & Ogg's Schowalter 1, nec 11-24-1w, sp. Patton etal's Buning 1, c se sw ne, 18-24-2e, rig.

JEFFERSON COUNTY—Wichita Oil Co.'s Simpson 1, nw sw sw, 19-10-17e, ru and sd.

LANE COUNTY — Blankenship Pet. Co.'s Shaeffer 1, nec ne, 24-16-28w, pd and sd.

MARION COUNTY — Connell & Prairie's Zirack 1, se sw, 3-18-3e, ru. Meyers' Papp 1, sw ne, 10-18-2e, sp. Hartman & Skaer and White Eagle's Kline 1, ne nw, 28-18-3e, dr 1200 ft. Hanna's Pankratz 1, ne ne sw, 13-20-3e, rig.

MARSHALL COUNTY—Irwin et al's Cooper 1, ne nw, 10-3-7e, sp.

MORRIS COUNTY—Hiatt et al's Blythe 1, nw ne, 35-15-5e, sp.

McPHERSON COUNTY—McPherson County Gas Co.'s Stein 1, sw ne sw, 17-18-1w, dr and a td 35-15 ft. Ted Washabaugh's Vosshell 1, ne ne 9-21-3w, ur 8-in cas. Lariaux et al's Martinan 1, ne se, 9-19-3w, rig. Mid-Kansas' Yoder 1, c nw sw, 8-20-4w, dr 2908 ft. Helmerich & Payne's Rusen 1, c ne se sw, 23-21-2w, rig.

NESS COUNTY—Barnsdall's Lauck 1, c sw 35-18-21w, dr 1398 ft.

OTTAWA COUNTY—Anderson et al's Bank 1, ne nw, 28-10-2w. Papoose Oil Co.'s Evans 1, sw nw nw, 34-18-14e, lcn.

PAWNEE COUNTY—F. C. Troupe's Lovett 1, cel ne ne, 31-21-16w, sd 1560 ft.

PHILLIPS COUNTY—Watsonian Oil Co.'s Marklein 1, ne sw, 21-3-19w, dr 3685 ft. Watsonian and British-American's Weinman 1, c c sw sw, 34-2-19w, dr 800 ft.

RICE COUNTY — Allison & Fitzwilliams' Poland 1, ne sw ne, 36-19-8w, cellar. Higgins & Steinbuble's Shurr 1, ne sw, 21-20-20w, ½ million gas 1411-13 ft.

RUSH COUNTY—Danciger O. & R. Co.'s Pinonka 1, c ne sw ne, 17-19-17w, sd 600 ft. Sinclair's Beiching 1, nw ne nw, 9-16-16w, ur 5-in cas 3718 ft. Central Commercial's Brack 1, nec sw sw, 12-17-16w, sp and sd. Phillips' Legleiter 1, c ne nw se, 10-16-18w, dr 1070 ft. Barnsdall's Brack 1, c se se, 21-17-17w, rig. Danciger's Swindt 1, c nw se sw, 22-17-17w, rig.

SALINE COUNTY—M. Esty et al's Peterson 1, c ne, 6-16-5w, sd after sp. Nathan-Jones et al's Robertson 1, nw sw, 27-14-2w, dr 3085 ft.

SEDGWICK COUNTY—Magnolia's Wise 1, nwc 36-28-1w, dr 1175 ft. Barnsdall's Samuels 1, ne nw, 24-25-1e, fsh. Barnsdall's Faber 1, sw ne, 6-27-1w, sd 3480 ft. Morgan & Tilley's Fitzgerald 1, nw ne, 5-26-1w, dr 190 ft. Van Zandt & Mason's Fox 1, c nw sw, 19-25-1w, fsh 3431 ft. Connell Oil Co.'s Cross 1, ne cor, 27-25-1w, dr 3310 ft. Morgan et al's Corn 1, sw ne, 28-25-1w, dr 2656 ft. Kyser et al's Street 1, sw nw, 28-26-1w, dr 2865 ft. H. H. Patton's Ryder 1, nec, 22-25-1e, dr 1760 ft. Lario & Blair's Tjaden 1, c ne se, 22-29-2w, sd 2200 ft. Maglason's Buckles 1, nw se, 3-28-1w, sd 250 ft. Ramsey's Schuessler 1, swc, 1-25-1e, dr 1490 ft. McCulloch et al's John 1, c ne sw ne, 24-29-1e, dr 2950 ft. Miller & Wentz's Shaeffer 1, nw ne, 9-27-2w, set 15-in at 350 ft. Lewis et al's Taylor 1, nw ne, 23-27-2e, sd 1680 ft. Shawrer et al's Reeves 1, c se sw se, 19-28-1e, dr 2310 ft. Austin Drlg Co.'s Stuckey 1, sw nw, 12-26-5w, bldg rig. Washabaugh's Harrison 1, e nw ne ne, 3-26-2w, rig. Hammond & Stout's Roeder 1, sw nw, 23-27-2w, timbers. Connell & Slick's Mahanah 1, c ne se se, 3-25-1w, rig.

SHERMAN COUNTY—A. L. Henson et al's Murray 1, ne se nw, 22-7-40w, sd 3055 ft.

SMITH COUNTY—Mid-Kansas' Blank 1, nec, 4-2s-13w, dr 1925 ft.

STEPHENS COUNTY—W. Sidwell et al's Kelly 1, sw ne, 16-34-38w, co 1160 ft. Trees Oil Co.'s Unknown 1, sw ne sw, 3-35-38w, fsh 430 ft. McKenna et al's Hamm 1, se ne, I0-33-38w, se ne, 10-33-38w, dr 2400 ft.

SUMNER COUNTY—Gypsy's Williams 1, nw se sw, 16-35-3w, fsh 4400 ft. Davidson et al's Strickland 1, sw se, 12-35-1w, rig.

TREGO COUNTY—Central Commercial Oil Co.'s Ellis 1, ne sw ne, 20-13-21w, sd 3300 ft.

WASHINGTON COUNTY—McCool & Vincent's Linn 1, nw ne, 27-4-3e, ru.

SOUTHERN CALIFORNIA

ATHENS—Burlingame Pet. Corp.'s Hamm 1, dr 150 ft.

COSTA MESA—Mesa Pet. Corp.'s B. A. 1, dr hard sand 3525 ft.

DOWNEY—Rio Grande Oil Co.'s Osborne 1, dr sand and shale 3888 ft.

FULLERTON—Shell's Stern 1, coring hard sand 6383 ft.

GARDEN GROVE—Texas Co.'s Crawford 1, dr shale 3839 ft.

HUNTINGTON BEACH—Western Drilling and Producing Co.'s Pacific Ranch 1, fsh 4425 ft.

INGLEWOOD—James Pollard's Cal-Eastern 1, dr sand 3940 ft. Ring Pet. Corp.'s Simons 1-A, dr shale 2575 ft.

LOS NIETOS—R. W. Jackson's Community rigging rotary, new lcn.

MAYWOOD—Richfield's Vernon 1, dr sandy shale 4635 ft.

POMONA—Pomona Oil Assn.'s 1, fsh 975 ft.

PUENTE—Richfield's Didier 1, 10-in cas recemt 3325 ft, td 3435 ft.

RIVERSIDE COUNTY — Hall Pet. Co.'s Watt 1, re-installing rotary, td 930 ft.

SAN BERNARDINO COUNTY—Mahala Oil & Gas Co.'s 1, perforating 6¼-in cas, td 4010 ft.

SAN DIEGO COUNTY—Western Pacific Oil Co.'s 3, will deepen from 3365 ft. S. S. Turner's Baler 1, dr shale and sand 1660 ft.

IMPERIAL COUNTY—Imperial Valley Pet. Co.'s 1, dr loose shale 1426 ft.

SOUTHWEST TEXAS

Completion

GUADALUPE COUNTY—
Simms Oil Co., Jandt 1, 2 mi w Seguin . . . . . * 1502

BASTROP COUNTY — Gypsy Prod. Co.'s Lottman 1, e Bastrop, td 2145 ft. Livingston et al's McCall 1, wo, 1 mi s Bastrop, sd 1010 ft. Owens et al's White 1, 2 mi w Cedar Creek, sd 2075 ft; Goodman 1, 1½ mi from Cedar Creek, sd 382 ft.

CALDWELL COUNTY—Shell's Wilhms 1, Jolly district, temp. abn. lcn. Anderson et al's J. P. Horner 1, set 850 ft. Capps et al's New 1, n Salt Flat, set liner 2562 ft; Buda, swabbed, no results, will deepen. Gulf's Graffe 1, Branyon dist., dr 2050 ft shale.

DUVAL COUNTY — O. Henry Oil Co.'s Henry 1, r to bottom, sand at 1758 ft. W. F. Morgan's Welder Wood 1, sur 102, dr 90 ft.

GONZALES COUNTY—Greene et al's Dix 1, sw part of county, fsh for drill pipe at 5212 ft. Cranfill & Reynolds' Webb 1, Ottine area, dr 4020 ft chalk. Empire G. & F. Co.'s San Marcos River State 1, Ottine area, dr 1000 ft lime. Indiana Pet. Corp.'s Karnstadt 1, Ottine area, dr 1925 ft shale. Joe Brunner's Miller 1, 1 mi n Waelder, ru and sd.

GUADALUPE COUNTY — Christie et al's Thomas 1, near Prairie Lea, sd 1053 ft. Sights et al's Woehler 1, 4 mi e Seguin, sd 1965 ft. Miller Bros.' Springs 1, 5 mi s Seguin, testing chalk at 2120-42 ft. Shell Pet. Corp.'s Grein 1, 4 mi se Seguin, dr Edwards lime 2188 ft. Simms Oil Co.'s Jandt 1, 2 mi w Seguin, abn 1502 ft, top Edwards 1454 ft.

JIM HOGG COUNTY — The Texas Co.'s Vela 1, section 582, blk 52, dk.

MAVERICK COUNTY—Rycade Oil Corp.'s Chittim 4, 20 mi e Eagle Pass, ru; Chittim 3, 20 mi e Eagle Pass, dr 2650 ft shale; Sullivan 4, dk.

WEBB COUNTY—The Texas Co.'s Weeks & Wilder 1, Sec. 683, near Carolina-Tex pool, dr 2256 ft shale and sand .

WEST TEXAS

Completions

Company, Well and Location		Initial Production Bbls.	Depth
NOLAN COUNTY—			
White Eagle O. & R. Co., Allyn 1	*		3000
PECOS COUNTY—			
Atlantic Oil Prod.. Co., Sellman 1 ..	*		1865
M. Z. Dibble et al, Bonebrake 1 ...	*		2004
Phillips Pet. Co., J. L. Nutt 1	*		2730
WARD COUNTY—			
Rector Oil Co., Johnson 1	*		2677

ANDREWS COUNTY—Deep Rock Oil Co.'s Hostetter 1, elev 3224 ft, top salt 1890 ft, fsh 2785 ft.

BORDEN COUNTY—Gibson-Johnson et al's Higginbotham 1, rig. Greene O. & R. Co.'s Slaughter 1, dr 515 ft. C. E. Hyde et al's H. D. Beal 1, rig. Teas & Wheeler's Long 1, rig.

BREWSTER COUNTY—Ed. W. Bateman & Co.'s Nevill 1, elev 3950 ft, show gas with trace dead oil and run -10-inch cas 1923 ft. Brewster Oil Co.'s Fee 1, sd 470 ft. J. P. Johnson & Bert Weekly's Jackson-Harmon 1, machine.

COKE COUNTY — Cates & Dennis' J. R. Mims 1, ur 1585 ft; Mims 2, spudded and sd. Mid-Kansas O. & G. Co.'s Lackey 1, set 6-inch cas 3090 ft. Lipan Oil Co.'s Rawlings 1, elev 1952 ft, sd 2900 ft.

CONCHO COUNTY — J. L. Duffey-Clark-McGee's Lovelace-Lockhart 1, sd 660 ft. J. L. Duffey & Loofburrow's Hill 1, ur cas 1800 ft. Lloyd Jones et al's Jones 1, sd 660 ft.

CRANE COUNTY — C. C. Duffey et al's Cowden 4, elev 2584 ft, top salt 710 ft, run tubing after shot, td 2428 ft. Gulf Prod. Co.'s Waddell 6, top salt 1270 ft, dr 2890 ft.

CROCKETT COUNTY—G. H. Anderson & P. H. Willams' University 1, elev 2610 ft, top salt 990 ft, top lime 2000 ft, sd 2610 ft. Barbara Oil Co.'s Cox 1, elev 2051 ft, top lime 1082 ft, sd 1300 ft. W. W. Donnelly & W. A. Moncrief's Massey 1-A, machine; Todd 1, (Sec. 35), spudded and sd; Todd 2, dr 865 ft. W. W. Donnelly et al's Shannon 1, (Sec. 42), spudding. Ed. G. Lewis & W. T. Daniels' Pecos River Bed 1, sd 236 ft. Tidal Oil Co.'s W. W. Weatherred 1, elev 2329 ft, top salt 485 ft, dr 825 ft. J. D. Wheeler et al's State Fee 1, sd 410 ft.

CULBERSON COUNTY — Deep Rock Oil Co. et al's Kloh 1, rig. Hickey et al's Finley 1, elev 3916 ft, sd 1780 ft.

JEFF DAVIS COUNTY—Sam F. Means et al's J. Z. Means 1, ur 5-inch cas acct. water 4005 ft.

FISHER COUNTY—Bickerstaff et al's McWhirter 1, elev 1932 ft, sd 2000 ft. Cranfill-Reynolds & Sun Oil Co.'s Brown 1, elev 1846 ft, dr 2715 ft; Flemming 1, elev 1803 ft, dr 2510 ft; B. F. Willingham 2, elev 1808 ft, dr 1325 ft. J. B. Dunigan et al's Henry 1, elev 1913 ft, ur 2050 ft. Culberson Bros. & Mesa Oil Co.'s Griffin 1, rig. Gilman-McMurray & French's Cleveland 1, elev 1973 ft, dr 885 ft. Hucony Gas Co.'s Marberry 1, elev 1876 ft, top lime 2960 ft, sd hfw 3250 ft. Landreth Prod. Corp.'s Cooper 1, elev 1825 ft, dr 248 5ft. Bob

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GAINES COUNTY — Pure Oil Co.'s Williamson 1, elev 3197 ft, top salt 2333 ft, dr 3470 ft.

GARZA COUNTY—Emerald Oil Co.'s J. M. Boren 4, set cas 1975 ft.

GLASSCOCK COUNTY—Fred L. Kyle & Chas. Daniels' Meek 1, elev 2792 ft, rig. Gibson-Johnson et al's Mann 1, elev 2703 ft, top salt 1170 ft, making sulphur water dr 2875-2900 ft. McElreath & Suggett's Underwood 1, lcn. Meriwether Oil Co.'s McDowell 2, elev 2517 ft, top salt 970 ft, top lime 2445 ft, dr 2925 ft. Penn Oil Co. & Empire G. & F. Co.'s Hughes 1, elev 2733 ft, top sulphur water 2580 ft, dr hfw 2655 ft. White Eagle O. & R. Co.'s Dunbar 1, elev 2705 ft, top salt 1140 ft, top lime 2615 ft, dr 3010 ft. World Oil Co.'s McDowell 1-C, elev 2530 ft, sd 754 ft.

TOM GREEN COUNTY — F. P. Green et al's Fee 1, sd 1931 ft. Williams et al's Wilkey 1, set cas 370 ft.

HOWARD COUNTY — Harrison et al's Dodge 1, sd 3257 ft. Phillips Pet. Co.'s Thomas 1, elev 2591 ft, top salt 1170 ft, top lime 3030 ft, co 3950 ft.

HUDSPETH COUNTY — The California Co.'s University 1, elev 5833 ft, dr 590 ft. Lockhart Bros. et al's Western States Fee 1, spudded and sd. Western States Oil Co.'s Gardner-Mosely 1, elev 5086 ft, sd 3155 ft; Moore 1, elev 5150 ft, sd 2760 ft.

IRION COUNTY — Furhman Pet. Corp.'s Sugg 1, Lse. 3, top salt 823 ft, dr 1345 ft. Kimbrough et al's Nutt 1, elev 2299 ft, sd 1420 ft. Kimbrough & Flinchbaugh's Tankersley 1, elev 2241 ft, spudded and sd. Kingwood Oil Co.'s Sugg 1, elev 2334 ft, sd change power, td 5875 ft. Pecos Valley Oil Co.'s Joe Stock 1, sd 460 ft. Signal Oil Co.'s Sugg 2, top salt 760 ft, dr 1410 ft. Sun Oil Co.'s Tankersley 1, elev 2254 ft, co after shot 1065 ft, td 1137 ft. Webb et al's Nutt 1, elev 2351 ft, dr 3185 ft. Western Oil Co.'s H. Horney 1, passes up show oil 1225-26 ft, dr 1296 ft.

JONES COUNTY—Culberson Bros. et al's Anderson 1, lcn. E. P. Campbell & Co.'s Herndon 2, dr 2350 ft. McClanahan et al's Hall 1, tested 2¼ bailers oil per hour, lowering casing to oil sand 1604-14 ft. McGinley-Sigler Co.'s Whittemore 1, dr 710 ft. McNeeley et al's Bland 1, spudded and sd. Mid-Sun Oil Corp.'s Hoehn 1, dr by tools 2410 ft. Milt Richardson-McGinley et al's Martin 1, sd 1300 ft. Roeser-Pendleton et al's Castle 1, dr 1585 ft. Sedgwick O. & G. Co.'s Brown 1, lcn; Routh 1, ur cas 1095 ft. Tomberlin et al's Horn 1, spudded and sd.

KING COUNTY—Huff Oil Co.'s M. A. Martin 1, rig.

LOVING COUNTY—Lockhart & Co.'s R. A. Cox 1, lcn; Hazell 1, elev 2705 ft, rig H. L. Lepp 1, top salt 725 ft, dr 1075 ft; Hubbard 1, elev 2706 ft, top salt 700 ft, dr 2080 ft; Hubbard 2, rig; Wheat-Lloyd 1-A, elev 2697 ft, top salt 715 ft, top black lime 4191 ft, swab and °owed 300 bbls oil after shot 180 qts. in sand 4191-4238 ft; J. J. Wheat 1-H, rig.

LYNN COUNTY—Hart Oil Corp. & McCamey's Edwards 1, elev 3128 ft, co 820 ft. H. F. Miller et al's May 1, spudded and sd.

MENARD COUNTY—Carl G. Cromwell et al's Wilhelm 1, elev 2245 ft, dr 2085 ft.

MIDLAND COUNTY—O. H. Shoup et al's Parks 1, sd 4980 ft.

MITCHELL COUNTY — Clopton & Hammon's McKenzie 1, dk. Simms Oil Co.'s Ellwood 1, co making 6 million feet gas 600-20 ft. Teas & Wheeler's Radford 1, elev 2223 ft, top salt 667 ft, top lime 1365 ft, crooked hole 3660 ft.

NOLAN COUNTY—Bradstreet et al's Kuteman 1, rig. C. M. Root Drlg. Co.'s Simpson 1, dr 2755 ft.

PECOS COUNTY—Alexander-Lyles et al's Sellman 1, sd 1655 ft. Benedum-Trees et al's Corder 1-A, elev 2713 ft, top lime 1840 ft, sd 3275 ft. M. H. Black et al's Pecos Land Co. fee 1, lcn. Buell-Hanag et al's University 1-B, lcn. K. A. Crowley et al's R. G. Heiner 1, dr 215 ft. Doran & McGee's Pecos Land Fee 1,

lcn. Spot Geyer & Earl C. Frates' B. F. Smith 1, lcn. J. W. Grant et al's Turney 1, elev 2592 ft, top lime 1015 ft, dr 4225 ft. Grayburg Oil Co.'s University 1, elev 2725 ft, dr 112 ft. Marland Prod. Co.'s Blakeslee 1, elev 2448 ft, sulphur water 1015 ft, ur 1045 ft. McCarty Oil Co.'s A. A. Gray 1, elev 2524 ft, sd to re-set cas while flowing small heads oil 1162-68 ft. Mauch & Krogen's Holmes 1, elev 2325 ft, top salt 535 ft, sd 1010 ft. Pecos Valley Oil Co.'s Pecos Fee 2, elev 2499 ft, top salt 1107 ft, flowed 75 bbls oil daily at 1617-25 ft and plug back to 1585 ft to re-set casing. Perren et al's H. J. Eaton 1, machine. Schumaker et al's Williams 1, elev 2388 ft, sd 700 ft. Southern Crude Oil Purchasing Co.'s Scarbauer 1, elev 3680 ft, dr 3680 ft. Stein & McGee's Peterson 1, lcn. Talbott & Dittman's Unsicker 1, elev 2471 ft, showing oil, gas and water, dr 1435 ft. Transcontinental Oil Co.'s University 1, elev 2552 ft, top lime 1035 ft and 3315 ft, dr crooked hole 4196 ft. Trees Oil Co. & Empire G. & F. Co.'s J. C. Trees 1, spudded and sd. World Oil Co.'s Kloh 1, elev 2810 ft, sd 3105 ft.

PRESIDIO COUNTY—Brite Prod. Co.'s L. C. Brite 1, elev 4685 ft, pb from 5156 to 4150 ft and shot 300 qts 4070-4150 ft, co with show gas. C. E. Miller-Delmar & Phillips Pet. Co.'s Tootle 1, dr 2280 ft.

REAGAN COUNTY—The California Co.'s University 5, elev 2879 ft, top salt 1280 ft, dr 2835 ft. R. V. Oberholtzer et al's Talley 1, rig.

REEVES COUNTY—E. W. Brooks et al's Eddins 1, elev 2719 ft, top salt 1622 ft, top lime 3216 ft, sd 5658 ft. Exploration Co.'s Kinney 1, elev 2847 ft, sd 2900 ft. Penn Oil Co.'s Bowles 1, elev 2783 ft, top salt 1725 ft, dr 3125 ft. Southern Crude & Dixie Oil Co.'s Kloh 1, sd 240 ft. Lee O. White et al's Kloh 1, elev 3244 ft, spudded and sd.

RUNNELS COUNTY—G. W. Boyce et al's Lange 1, sd 1350 ft. Marland Prod. Co.'s Herring 1, dr 725 ft. Gene Mays et al's Currie 1, spudded and sd. Ira Nourse & Elvin Tilton's Cramer 1, elev 1775 ft, dr 2625 ft. Union Oil Co.'s Allen 1, sd 2900 ft.

SCHLEICHER COUNTY—Ft. McKavitt Oil Co.'s Tisdale 1, elev 2155 ft, sd 1535 ft. Interstate Explo. Co.'s Whitten 1, dr 650 ft.

SCURRY COUNTY—Joe Maxwell & Lou Ladd's Koonsman 1, lcn. R. R. Pender-Dieckman et al's Davis 1, elev 2208 ft, top salt 445 ft, sd 1810 ft.

STERLING COUNTY—Foster & Gracey Oil Co.'s Foster 1, elev 2260 ft, dr 2180 ft. Miller Bros. et al's Foster 1, spudded and sd.

SUTTON COUNTY—Phillips Pet. Co.'s Holman 1, elev 2247 ft, top lime 2315 ft, fsh 5770 ft. L. G. Priest et al's Allison 1, dr 310 ft. Southern & Dixie Oil Co.'s Allison 1, dr 1975 ft.

TAYLOR COUNTY — Grisham - Hunter Corp.'s Compbell 1, sd 1400 ft. Mid-Continent Pet. Corp.'s Taylor 1, elev 1933 ft, swabbing 5 bbls oil daily 2384-3461 ft. Thompson et al's Hammer 1, sd 1615 ft. L. H. Wentz et al's Armour 1, dr 920 ft.

TERRELL COUNTY—Milham Corp.'s Bassett 1, elev 2270 ft, fsh 4635 ft. Keck-Pecos Oil Trust's Hamilton 1, elev 1733 ft, sd 1749 ft.

VAL VERDE COUNTY—Dyer Bros. et al's Wilson 1, elev 2115 ft, sd 2705 ft. Producer Oil Co. et al's Everett 1, sd 1950 ft. Val Vert Oil Corp.'s Bassett 1-A, elev 2069 ft, dr black shale 3760 ft.

WARD COUNTY—Atlantic Oil Prod. Co. & Delmar Oil Co.'s Hayzlett 1, elev 2504 ft, top salt 715 ft, top lime 2390 ft, dr 2400 ft. Barstow O. & G. Co.'s Monroe-Gillespie 1, spudded and sd. Gulf Prod. Co.'s G. W. O'Brien 4, dr 190 ft. J-H-L Oil Co.'s Hayzlett 1, elev 2522 ft, top salt 792 ft, dr 1850 ft. Kemper Kimverlin et al's Thompson 1, lcn. Lovelace et al's Redman 1, set cas 305 ft.

WINKLER COUNTY — Gulf Prod. Co.'s Scarborough 1, elev 2953 ft, top salt 1210 ft, dr 2880 ft. Prairie O. & G. Co.'s Scarborough 1, dr 505 ft. Shell Pet. Corp. & Llano Oil Co.'s Scarborough 4, elev 2953 ft, top salt 1105 ft, dr with 1800 ft oil in hole 2990 ft; Scarborough 5, dr 300 ft. Texas-Canadian Oil Co.'s Kloh 1, fsh tools 900 ft.

YOAKUM COUNTY—Bert Weekly et al's Knight 1, sd 375 ft.

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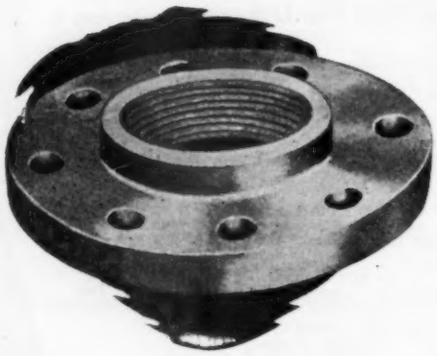

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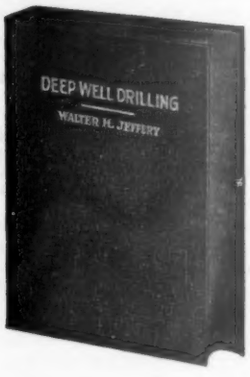

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Louisiana--Arkansas Field Notes

Champagnolle and Cotton Valley Fields Extended

SHREVEPORT, La.—Extension two miles southwest of the 2800-foot horizon of the Champagnolle field into the old El Dorado East Field in Union County, and an extension half a mile east of the Trinity sand deep production area of Cotton Valley, were the most important developments last week in the Shreveport district.

Gulf Refining Company's Gaddy 2 in Section 30-17-14, completed at 2859 feet making 49,916,000 feet of gas and 240 barrels of fluid, 10 per cent. oil, was the well which extended the Champagnolle field into the borders of the old East Field, where Arkansas' first production was obtained in 1921 and where some activity has since been underway. The horizon of production in the old field, however, is around the 2100-foot level. Of course the new development makes every old hole drilled to the 2100-foot pay a potential producer at the deeper level and a number of deepenings in holes are expected.

In reality the extension of Champagnolle is approximately four miles as measured from the southwest edge of production but there are two wells completed last summer in Section 21-17-14 that were approximately midway between the two producing areas. One of these was Root Refineries' Jerry 1 which yielded considerable oil from the 2800-foot horizon. An offset of the same company was also standardized.

Coming as this development did on the heels of the apparent linking of the Louann and Stephens pools by McDonald Brothers' Wilson 1, in Section 25-15-18, which will be put on the beam at 2828 feet, there is the most decidedly "bullish" feeling existing in South Arkansas since Champagnolle started to wane.

Whether the Wilson test was a "flash in the pan" or really means a linking of two fields will be more definitely established during the next few days as preparations are under way to test Charles McDonald's Wilson 1 in SW NW Section 25-15-18, a quarter of a mile north of the other Wilson well. The test will be made around 2830 feet.

Cotton Valley Extension

Cotton Valley's Trinity sand field extension came as a result of the completion of Cotton Valley Oil Corporation's Hope 19, Section 24-21-10, at 4700 feet, making four and a half million feet of gas. The well had shown for two and a half mililon feet at 4527 feet. It is a half mile east of Alabama Petroleum Company's Coyle deep wells and extends the deep field that distance. This well is regarded by geologists as an excellent example of the variable Trinity horizons in Cotton Valley, seven of which have been definitely defined. Some of the seven, however, are missing in some of the deep tests due to the lenticularity of the Trinity formation in that field. The only two oil producers of magnitude added in this field in the deep pay were the Ohio Oil Company's Bodcaw 38 and 39 in Section 15-21-10. Geologists now refer to the Trinity in Cotton Valley as the Bodcaw sand.

Joe Hurley's Arkansas Land and Timber 1 in Section 29-16-12, Calhoun County, Arkansas, which tested dry with a slight show of oil at 2314 feet and at 2318 feet, tested salt water at 2856 feet and will be further deepened.

R. L. Gay, Trustee, is arranging to drill plug in Bowman-Hicks 2 in Section 14-7-14, Sabine Parish, at 1997 feet, with total depth of 2007 feet. This test is in the same section with Bowman-Hicks 2 (old series) completed several weeks ago as a 50-barrel flowing well around 2150 feet. A test around this horizon in Sabine Lumber Company 1 in Section 13-7-14 failed to show oil and this hole is now being cored at 2486 feet in broken shale which is showing streaks of an oily sand. Owners announce that the latter test will be drilled to 3400 feet if pay is not encountered higher. The original Bowman-Hicks 2 is a rank wildcat, 19 miles from nearest production.

Aside from the Gaddy well, Champagnolle performed nothing spectacular during the week. Ohio Oil Company's Frazier 2 in the northeast extension in Section 6-17-13, gauged 266 barrels of clean oil which is flowing from 3054 feet.

Other tests completed during the week were failures. J. W. Hoosier's Slade 4 in the extreme northwest part of the field in Section 3-17-14, which showed some oil was abandoned during the week as a salt water hole at 3332 feet. Surrounding tests had also been failures and it is fairly well established that production does not lie in that direction. On the western edge of the field, Mazda Oil Corporation's Diffie 1 in Section 16-17-14 was abandoned as a dry hole at 3322 feet.

Study of Cotton Valley Made by Bureau

Shreveport, La.—A study made of the deep Trinity sand horizons in Cotton Valley field by the Bureau of Mines for the past three months, during which 1500 cores have been examined, reveals that the deep pay strata are linticular to the point of making production very uncertain. A good producer may commonly be offset by a dry hole, the research shows after seven distinct producing horizons have been outlined in the Trinity series. The Trinity structure is found to be an elongated anti-cline, dipping more than the Blossom sand of the same field around 2500 feet.

The seventh sand has been named the Bodcaw, fee name of the site of the first deep well. Cotton Valley Oil Corporation's Hope 19, in Section 24-21-10, is shut down waiting further orders after blowing in recently for 4,000,000 cubic feet of gas from 4700 feet. This well produced 2,500,000 cubic feet at 4527 feet.

Study made by the bureau shows that little deflection is had in rotary drilling in Cotton Valley field, enabling engineers to obtain fairly accurate contour maps.

Louisiana Completions

Louisiana furnished one producer during the week, Dixie Oil Company's Robertshaw 91 in Section 14-21-15, Caddo Parish, Pine Island, which is pumping 93 barrels of oil daily from the Glen Rose (Trinity) sand at 3693 feet. The company is reported ready to resume operations in Robertshaw 92 in the same section which has been shut down at 6099 feet after showing some oil and gas at this level. Special pipe ordered for the well and for which the operations were suspended, is reported now on the ground.

Simplex Oil Company tested dry and abandoned Hunsicker 6 in Section 15-20-15 in chalk rock at total depth of 2424 feet. Two substantial gassers were added in Richland Parish, one in the Lucknow

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area and one in the Boughton district. The former is Magnolia Petroleum Company's D. R. Sartor 1 in Section 21-16-6e, which gauged 39,650,000 feet at 2448 feet, and the latter is Ouachita Natural Gas Company's Pardue 5 in Section 5-15-6e, which gauged 39,420,000 feet at 2447 feet.

The Monroe gas area added four gassers. Ouachita Natural Gas Company's Leiber 5 in Section 4-19-4e, Ouachita Parish, gauged nine million feet at 2134 feet; Palmer Corporation's Fee 5, Section 24-19-4e, was good for one million feet, at 2220 feet; Amalgamated Company's Fairley 6, in Section 53-20-4e, Morehouse Parish, gauged 8,800,000 feet at 2183 feet; and United Carbon Company's Nichols 1, in Section 6-20-3e, Union Parish, was good for half a million feet at 2141 feet. Ayers Brothers tested salt water and abandoned Tremont 3 in Section 30-10-2e, LaSalle Parish, Urania district.

New drilling remained at practically the same level as for the preceding week, seven new locations being announced as compared to six the preceding seven-day period. Resumption of work in five old tests was also started.

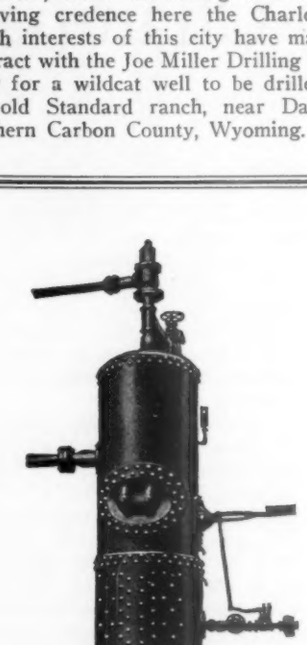
Palmer Corporation added another failure in the East Carroll Parish, Louisiana, area, where this company last summer completed a rank wildcat as a 40-million-foot gasser. Permit was obtained during the week to abandon the latest test, Mitchiner 1, Section 8-19-11e. Last official reports from this test were that it was drilling in igneous rock at 2700 feet.

Claiborne Parish continues to hold interest with its three deep tests. Dixie Oil Company has finally completed a fishing job in Gilbert 1 in Section 27-21-5w, and is drilling at 5014 feet. El Dorado Chief Oil Company is drilling in chalk at 2540 feet in Baker 1 in Section 26-20-7, and Smitherman and McDonald are drilling lime at 4640 feet in Miller 1 in Section 17-23-8, a deep test in the old Haynesville field.

Increasing Interest Shown In Safety Instruction

Washington, D. C.—Petroleum and natural gas producing companies are taking an ever increasing interest in safety and first-aid instruction courses offered by the Department of Commerce, through the Safety Division of the U. S. Bureau of Mines. Thousands of oil company employes have already completed safety courses under a co-operative arrangement whereby the safety instructors of the bureau have instructed departmental foremen and other officials and these men have immediately undertaken the training of all other employes. A striking instance of the practical value of first-aid training in the oil producing industry was recently brought to the attention of the Bureau of Mines. In a Colorado field, a new well had been shot with 140 quarts of nitroglycerin, and it was decided to lower the casing while the well was giving off natural gas that had a very pungent odor. A man was sent to the derrick to stab the casing; the job was completed and the man climbed down to the derrick floor, walked outside, where he dropped and became quite rigid. One of the workmen, who had taken the first-aid course in April, 1928, noticed the actions of the man and started artificial respiration immediately. The victim showed no signs of breathing for 20 minutes, but did gain consciousness before the doctor arrived. The doctor stated that this man would not have lived 10 minutes after he dropped and that the gas had caused the muscles of the heart and lungs to contract.

Denver, Colo.—According to a report receiving credence here the Charles A. Smith interests of this city have made a contract with the Joe Miller Drilling Company for a wildcat well to be drilled on the old Standard ranch, near Dad, in southern Carbon County, Wyoming.



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Summary of Oil and Gas Development In Western Canada for 1928

THE year 1928 showed further increase in activity in the development of the petroleum and natural gas resources of Western Canada, centered in Turner Valley in Alberta; the successful result obtained in the previous year becoming the incentive to the application of the latest methods to the drilling into the dolomitics limestone, and bringing in of the wells to production. This stimulation of interest has further resulted in a marked revival in drilling activities in other areas in the outer foothills, and on the plains extending from the international boundary to the Clearwater River in the extreme north of Alberta. So far, none of these test holes has reached depths to give conclusive results, but the many indications encountered are encouraging and are influencing operators to continue their endeavors.

Representatives of several large and experienced oil financial groups are still investigating the conditions in Western Canada and two of such groups are sufficiently satisfied to have already commenced actual drilling, while a third intends starting a prospecting campaign early in the spring. Such operations are nearly all being carried on in Alberta but with the good indications in prospect wells in Alberta and near the Alberta-Saskatchewan boundary, it is reasonable to expect their extension eastward.

The practice is becoming general, before commencing deep drilling operations, of having prospective areas tested by means of series of shallow boreholes, which by fixing the elevations of a number of points on some given geological horizon or "marker," encountered in the various boreholes and from other information derived from them, enable the geological structure to be mapped with fair accuracy and so indicate the most suitable spots for test drilling to the major productive horizons. In all, there are eight different and independent parties now engaged on this class of work in Alberta, and their efforts may confidently be expected to result in information leading in the near future to the location of other productive areas than those at present recognized.

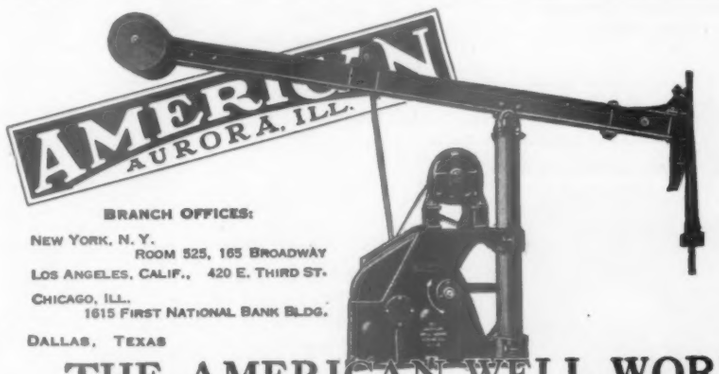
During the past year, the outstanding events have been the discovery of a dry gas in considerable volume in the Ribstone area and the completion of Well No. 1 of the Okalta Oils, Limited, in Turner Valley.

The former well is close to the Alberta-Saskatchewan boundary and its strike of gas must be regarded as having an important bearing on the possibilities of gas in commercial volumes, within reasonable distance of Saskatoon and other cities in Saskatchewan. The completion of Okalta No. 1 well with an outflow of wet gas greater than that of the world-famed Royalite No. 4, conclusively demonstrates that the production of the latter does not stand an isolated one of that order, but that the dolomitic limestone is capable of still heavier yields, provided the wells are drilled in under right conditions. The location of Okalta No. 1 on the western flank of the structure is particularly interesting and most encouraging as to the prospects of the lime in depth generally.

The total footage drilled in deep test wells in Western Canada since the first of January to the end of November, amounts to 163,137 feet, and represented by 101 wells in actual drilling. During the year the completions in Alberta were as follows:

Producing wells, oil and gas	17
Producing wells, gas only	3
Wells abandoned through accident or negative geological indications	7
Total	27

For the initial drilling of the wells to a point near the productive horizon, cable percussive tools are mostly used, although some operators prefer the rotary. For the completion to production zones where gas and oil under extremely high pressure may be anticipated—particularly in



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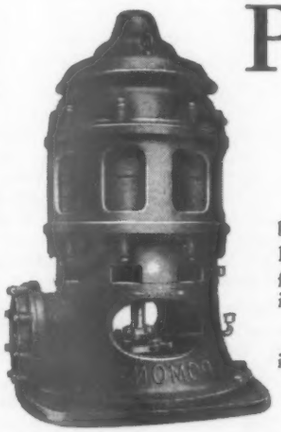

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the Turner Valley, the diamond drill is given a preference as this type of tools and machinery permit of the drilling in of the wells being done with less risk of endangering the drilling personnel or the safety of the well.

So far, no commercial production of oil or gas has been discovered outside of Alberta. The oil production from all areas in the province during the calendar year amounted to 489,531 barrels, which is an appreciable increase over the previous year. For comparison the respective figures are as follows:

	Naphtha	Light Crude	Heavy Crude	Total
1925	165,717	2,926	...	168,643
1926	211,008	2,609	5,981	219,598
1927	290,270	38,808	3,055	332,133
1928	410,623	70,734	8,174	489,531

Natural Gas Produced and Used in Alberta, 1928

Field—	Amount
Turner Valley—	
For use in field	1,884,167
For use by refinery	1,169,757
For use by gas company	4,339,766
Bow Island	7,000
Foremost	712,000
Barnwell	5,000
Brooks	38,000
Viking	2,377,769
Wainwright	126,000
Bow Island Town	36,000
Wetaskiwin	50,000
Bassano	2,000
Redcliff	860,000
Medicine Hat	
City	1,748,500
Private wells	825,000
Farm wells	18,000
Total	14,198,959

Bakersfield, Cal.—Richfield Oil Company has started a well on Section 20-28-28, immediately north of the Kern River field, the primary object being to open up a deeper sand which would correspond to that producing in some of the newer fields along the east side of the San Joaquin Valley.

For sale or lease, 41 acres in Section twenty-nine T. 9 S, R. 7 E., St. Martin Parish, Louisiana, Lee Hager Dome now being drilled by the Ohio Oil Company and The Texas Company—very desirable acreage; also royalty interest on 320 acres in Secs. 27 and 28 same dome. E. F. Delahoussaye, New Iberia, La.

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WITH THE MEN IN THE FIELD

Here's how Shell Petroleum Corporation's Gulf Coast scouting force looks just after a square meal. The photograph was made following a banquet at the University Club, Houston, after field men had been called in to headquarters for a business session. The size of this group is indicative of the Shell's growth in the Texas and Louisiana coastal territory, where the company started active operations only a few years ago.

Top row, left to right—J. A. O'Grady, P. B. Hinyard, R. B. Lack, F. G. Miller, assistant superintendent land department; W. Bates White, Walle Merritt (recently transferred to Shell Union of California in charge of lands); Gayle Griffin, W. F. Weed, H. L. Eversberg, Charles Noble.

Bottom row—J. B. Eby, geological department; E. F. Baldwin, W. H. Mengden, E. H. Patterson, chief scout; W. R. Taber, W. J. Achning, John C. Myers, geological department.

F. L. PEAVY

Snow covered mountains are beautiful to look upon; but when it comes to drilling oil wells on them in mid-winter, they're "not so hot." At any rate, F. L. Peavy, driller for The Texas Company, has no regrets because of being transferred from the highlands of Colorado back to South Texas, where the sunshine spends the winter (coming out from behind the rain clouds occasionally).

The accompanying picture was taken along the road between the camp at which Mr. Peavy was stationed in the Tow Creek district and the nearest town.

Mr. Peavy was formerly a driller for The Texas Company in the Gulf Coast, and when his company, which operates in Colorado as The Texas Production Company, decided to begin operating a rotary rig in the Tow Creek district, he was sent there. Most of the drilling there is with cable tools.

Having been transferred back to the South Texas division, Mr. Peavy is now in the Halletsville territory, Lavaca County, drilling The Texas Company's Russek 1. That test is a wildcat, located about five miles south of Ezell, and according to a recent report, was drilling at 2827 feet.

Robert Frank Lewis, 25 years ago the Beau Brummel of Saratoga, Texas, where wells flowed wild and business hummed 24 hours a day, is just a plain old assistant superintendent for Gulf Refining Company of Louisiana at Shreveport today. His friends now may take a good look at a work of art made by one of Saratoga's fashionable photographers when men were men and so were boys.

Three members of a Humble Oil & Refining Company seismograph crew, operating in Southern Louisiana for the past year. Left to right: John Pollard instrument operator, who has four years experience in "shooting;" H. G. Patrick, party chief, an engineering graduate of Rice Institute and three and one-half years with the Humble; and E. B. Hill, instrument operator and a product of Rice Institute's department of science.

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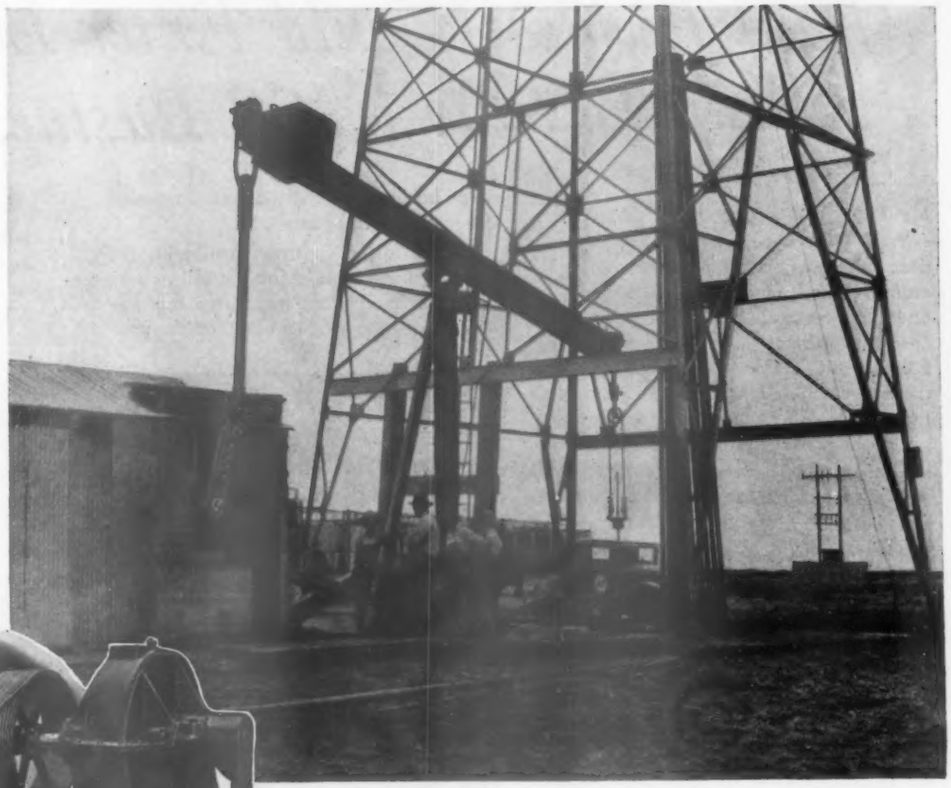

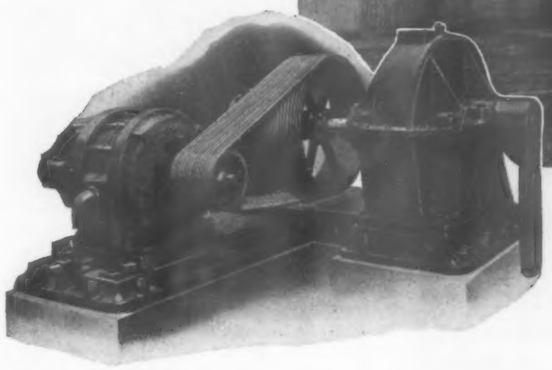

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Say you saw it in The OIL WEEKLY

Paul Peebles Would Enter Legislature To Stay in Oil Business

My Dearest Cleopatry:

Well, Cleo honey, here I am back in dear old Texas after I been gallavantin all around over South America helping to find new oil fields and then getting the operators to shut down on their drilling. I finally gotton everything fixed up down there as much as it can get fixed and then I heard the call of duty to come back and settle the bad conditions I find in the U. S. A.

I hadnt much more than drunk one of my last glasses of beer in Maricabo before boarding the ship for Houston when I gotten three (3) telegrams by cable to rush back and help out the folks at home. One telegram was from the Standard Oil Company which said:

"Paul we need you to help cut down the over production and keep the market up." One was from Dave Harrison which is a trust busting friend of mine which said in his telegram "Paul we need your assistance to relieve the situation and help hold up the price of oil, and the other was from my friend Veasey who is all het up about the grocery clerks in the oil business, which said that he needs my advise in a legal way in helping to frame up something to hold up the price of oil. So here I am, down at Austin, Texas, the capital of my native state, ready among other things to help Mike Hogg explain his position on deep sea loading lines.

On my way back on the boat I figgered out that if they all wants the same thing I can make a clean up by giving the same advice to all 3 of them and charging them all a fee for my services.

But when I gotten down to Austin which has a legislature in session right now, I find that while the telegrams all said the same, these friends of mine is about as near gitting together on how to do it as Al Smith and Bishop Cannon is on the proper way to down likker.

"We need your help and statistics and your pursuasive argumentive powers to help us lick the trust before we are all swallowed up," is what Dave said, and I added $100 to his fee for pulling a word on me which I had to spend a half a day finding out what it means.

Then Dave he continues "this bill before the legislature is a frame-up to drive us independents out of business. The trust is after us and if we dont stop them, our land departments wont even be allowed to make a blue print or print a letter head with the word 'oil' in it without gitting the permission from the trust. We got to beat that bill. It will drive us independents out of business immediate. What we need is a bill with full protection."

Then I called on my friend with the big company which is for the bill and he says that if we dont legislate some way to cut down the production of oil the market will fall out at the bottom and, "where will be all be"? he asks me.

PAUL IS BACK

After an absence of several months in parts only vaguely known, our old friend Paul Peebles, P. S. G., etc. etc., is again on the job and his observations as expressed in letters to his sweetheart at Goose Creek and to the great and near great of the oil industry, will begin again, appearing from time to time. Paul says that having been in South America wheer the niggers od the work, it must not be expected of him that he work too hard at writing letters, but he will be glad to hear from his "admires" throughout the world.

"It is bad enough," says he, "with the way things is running now. Why the head of our company has been saying for two or three years that the oil business is headed for the rocks."

He was gitting so serious about then than I made one of my jokes by telling him that maybe in the case of the rocks we are heading for we might call in Col. Kuldell for a conference in case he aint too busy with the chamber of commerce, or Bert Childs if he aint off somewhere wearing his fez.

And then gitting back to the business in hand, I asks him how much money did his company make last year, because the way he talked I was worried if they could pay me for the advice I was giving him. "Well," he said, "I can't count that high, but what we need is this here bill which the railroad commission thinks is a good bill, too."

Then I had a wire from my friend Veasey which says he is busy on some legal matters up in Oklahoma, but he will trust my judgment to get through a bill which he says is not ideal but which will cure all the oil men's trouble.

And all this has got me guessing, honey, and if it is too much for me you can see what everybody else in the oil business is up against on account of me being smarter than them. They all say that if we cut the price of oil it will be too bad, and if we don't cut the price it will be too much oil and that will be too bad, and worst of all is they is both right.

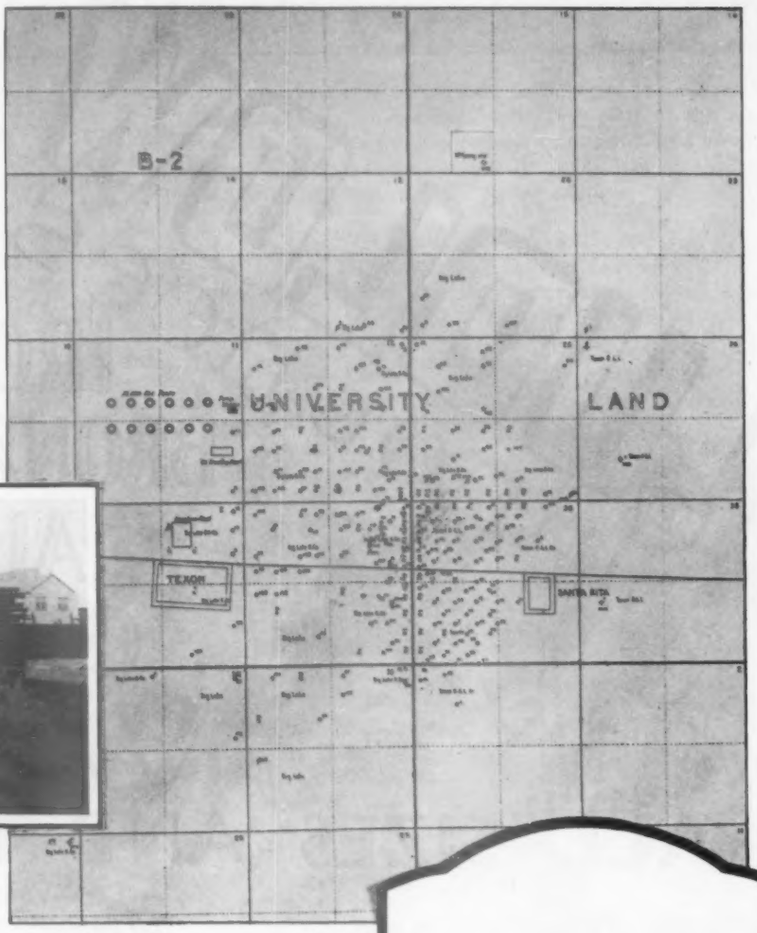
I come back to the United States to get back into the oil business but durned if it don't look like they all wants to turn their business over to the legislature, so I guess if I want to have anything to do with directing the destinies of the business I might as well throw my hat into the ring and run for the legislature from Goose Creek.

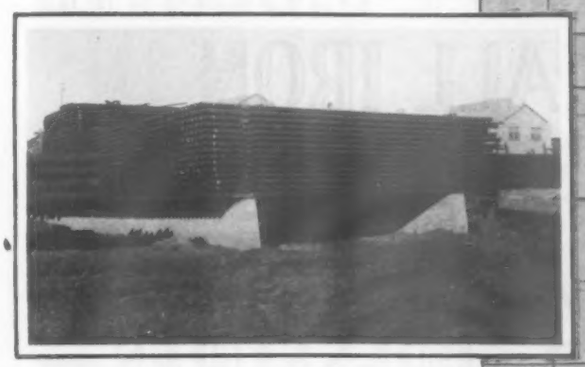
Or either I might line up with Dana Kelsey and Ed Reeser and Tom Slick and go to preaching about not working on Sunday. I might be a seven-day advent apostle and fix it sos that we will close down the fields two days a week, because if I ever was to start to preaching, which is about the only thing I aint done, it would not be long till I had half of the field men refusing to work on Saturday and the other half not keen for working on Sunday. One of the easiest things I know to do is to persuade people not to work if there is any way they can get by without it.

Well honey I guess you have been wondering why I did not write to you in so long, but I knowed that you knowed that I would come back to you sometime, so I did not write to you until I found out if I was or not. But now you can look for me most any time, unless I have to go to Chicago to referee the debate between Mr. Rockefeller and Mr. Stewart on which has got ethics in their business. I might have to call Miss Tarbell in on that too, so if you see anything in the papers about me and her you will know how it is.

Your loving Paul.

In Reagan County





The surface of wrought iron tubing being somewhat uneven, grips and anchors the thick galvanizing on its surface with a great tenacity. This, in itself, is responsible for a considerable lengthening of the life of the material.

As the somewhat higher cost of Byers tubing is only in fractional ratio to its life, many producers are specifying Byers Tubing and Casing exclusively for service where a tendency to more or less rapid corrosion of ordinary tubing is observed.

The selection of oil drilling equipment depends largely upon soil conditions, and it therefore becomes necessary to pay special attention to the choice of tubing and casing material in fields showing a highly corrosive influence.

Where sulphide concentration prevails, and ordinary tubing gives way in a very short time, it has been found that genuine Wrought Iron shows a life greatly in excess of any other tubing. This condition is explained by the fact that genuine wrought iron, such as Byers, contains millions of particles of non-corroding silicate slag fibres, which act as natural barriers to the penertation of sulphur compounds. Ordinary tubing, on the other hand, has been seen to corrode rapidly and a little vibration soon is likely to cause failure.

A. M. BYERS COMPANY, *Established 1864,* Pittsburgh, Pa.
Branch Offices: Houston — Dallas — Los Angeles — San Antonio — Tulsa
Distributors: International Supply Co., Jarecki Mfg. Co., Oil Well Supply Co.

Field Report

One prominent producer in this county, with 76 wells in production, has had wrought iron tubing in all the wells for about three years without a sign of corrosion trouble. This is typical of the results which may be obtained from Byers Galvanized Tubing, in spite of the high sulphide concentration in the district.

the *Spiral Stripe*
protects you against mistakes and substitution
Also look for name rolled in metal

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GENUINE WROUGHT IRON

Say you saw it in The OIL WEEKLY

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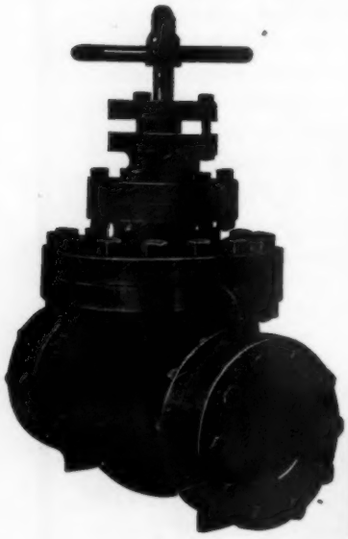

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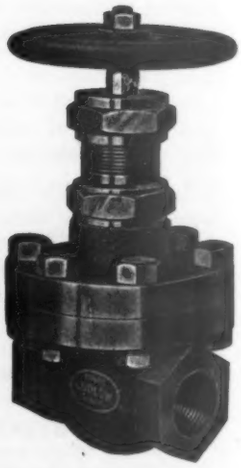


LUDLOW VALVES

CATALOG ON REQUEST

Say you saw it in The OIL WEEKLY

NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS

Cuno Auto-Klean Oil Filter

CUNO ENGINEERING CORPORATION

Cuno Engineering Corporation, Meridian, Connecticut, is introducing into the oil field the Cuno Auto-Klean Oil Filter, a European product, which has been in successful operation on automobiles, trucks, tractors, ships, airplanes and Diesel engines for some time. Its introduction here is for the purpose of eliminating troubles caused by grit, dirt and other foreign substances in lubricating oil used in gas driven and other oil field engines.

Cuno Oil Filter

This filter operates on a new principle called "edge filtration." A disc edge catches minute particles, having a filtering efficiency equal to 200-mesh woven screen.

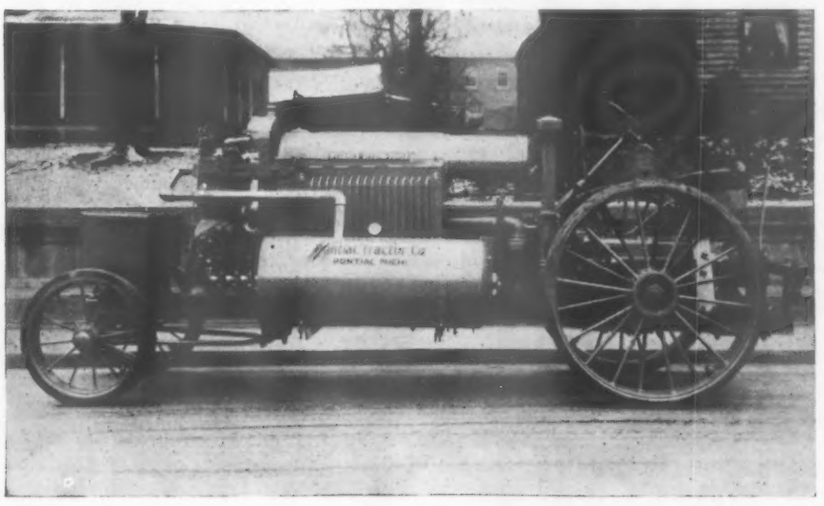
The handle, illustrated, in the accompanying photograph scrapes the discs clean when given a turn. The loosened dirt settles to the bottom of the large sump, keeping the filter 100 per cent. efficient, and thus overcoming the leading previous problem of oil filters, that of gumming up and requiring a cartridge change, necessitating lost power.

The Cuno Engineering Corporation announces that its engineers will be glad to go into any filtration problem peculiar to oil field gas engines or any other liquid filtering problem upon request.

Back-Filler Winch

PONTIAC TRACTOR COMPANY

The Pontiac Tractor Company, Pontiac, Michigan, is now manufacturing a backfiller winch which is designed to be mounted in connection with the Pontiac air compressor, allowing the backfilling and tamping job to be done simultaneously. It may be also mounted in connection with the Pontiac Arc welder, and operates in connection with the McCormick- Deering tractor.



Pontiac Backfiller Winch

The unit is operated from the driver's seat by a control lever. Operations can be handled from either side of the machine as well. It is of the single drum type, clutch and break, and gets its power off the drive shaft at the rear of the tractor, and is mounted on a frame at this point.

Automatic Cathead

HILL & FOSTER COMPANY

The new automatic cathead, manufactured by Hill & Foster Company, Wichita Falls, Texas, offers a leading feature in being equipped with roller bearings. The arrowhead type groove, roller bearing equipped, prevents the line, when slacked, from coming off the drum. Power is therefore increased because the line is brought closer to the shaft, and the eliminating of the heavy chain formerly used has served to lighten the line to the tongs.

Automatic Cathead

Rubber pads, three-inch by six-inch by one-inch takes the jar when partial revolutions, preventing the shock that is inevitable when steel meets steel for stopping, thus serving as a shock absorber.

Another new feature is the three-inch clutch pin replacing the old two-inch, increasing the actual clutch shoulder engaged 62 per cent.

All working parts on this new cathead can be removed and replaced while the cathead is on the rig. All parts are of uniform size throughout with the exception of the driving flange, Part No. 2, which must necessarily have the same size bore as the diameter of the shaft to which it is to be keyed.

Semi-Metallic Rotary Hose

DIXON VALVE & COUPLING COMPANY

The "Boss Tri-Duplex" rotary hose coupling, which is now manufactured by the Dixon Valve & Coupling Company, Philadelphia, manufacturers of the "Goodall Semi-Metallic Super" rotary hose, is a new product re-

Boss Tri-Duplex

sulting from a prolonged study of the severe service demanded or the rubber hose in the oil field made by Howard W. Goodall, president of the company.

This coupling, shown in an accompanying illustration, represents somewhat of a departure in the construction of hose couplings. It is encased in a jacket of steel. It has been constructed to withstand 4000 pounds of pressure per square inch, and is designed for use on any kind of rotary hose.

The "Boss Tri-Duplex" coupling has a six-piece steel clamp with 12 staggered bolts which give an evenly distributed clamping pressure over the entire circumference of the hose. Sufficient take-up is assured by the long dovetailing fingers which are also staggered in such a manner as to overlap, permitting the coupling of the hose with a wider range in outside diameters. To better effect a seal, the coupling is made with a front clamp, grooved on the inside to conform with the two half-round collars on the stem, and a back clamp both anchored together. Such construction permits uniform pressure of the clamp to the case if made in one section for its entire length. The three extending fingers on the front clamp grip the collar on the stem and further anchors the coupling to the hose.

The new coupling is sold by rubber manufacturers and jobbers all over the country, and will be described in detail upon inquiry to the manufacturers.

"What's New with Waukesha?" is a booklet just recently off the press describing new designs of engines developed this year by the Waukesha Motor Company, Waukesha, Wisconsin. This booklet devotes 20 pages to illustrations and descriptive matter, including charts on engine performance, and is neatly done in two colors. Complete explanation of operation, construction and performance is given covering the Great Six, the Big Six, the Transport Six, the Heavy-Duty Four, the Direct-Connected Power Plant, the Outboard Belted Power Unit, and the 25 H. P. Direct-Connected Power Plant.

S. F. Shaw is returning to Tulsa from a trip to Roumania, Poland and Italy where he has been investigating possibility of employing air-gas lift methods.

D. F. Higgins, Jr., of Loveland, Colorado, has been appointed Lecturer in Petroleum Geology in Northwestern University, Chicago, for the second semester of the current year, and beginning March first will give a course on the geology of petroleum.

International Supply Company of Tulsa will open a store building in the Capitol Hill area of Oklahoma City. John Ihrig, who has been branch manager at Lovell, Oklahoma, will have charge of the new store. A complete line of oil field supplies and equipment will be carried.

Ned Robbins, of the C. F. Camp Company, has returned to Tulsa from Peoria, Illinois, where he closed arrangements whereby the Camp Company will become state agents for the Russell Grader and Caterpillar tractor, both of which are used extensively in the oil industry.

Taubman Supply Corporation has established branches at Wichita Heights, Kansas, and Burton Santa Fe Addition, Oklahoma City, Oklahoma.

Murray Tool & Supply Company has opened a branch at Oklahoma City on the 23rd Street Pavement, Capitol Hill. It carries a complete stock of oil and gas well supplies and well known equipment. Murray Tool & Supply Company now maintains branches at Tulsa, Oklahoma City, Pawhuska, Uonca City, Seminole, Webb City, Weleetka, Yale and Maud in Oklahoma, and Wink in Texas, with general offices at Cleveland, Oklahoma.

The Bessemer Engine Company, Grove City, Pennsylvania, has recently announced two new additions to its line of oil field engines, one a 50 h.p. two-cycle and the second a 55-60 h.p. four-cycle engine.

The former, having all of the features of the Bessemer Type O.F. line, has in addition arranged for marketing it with either Timken roller bearings or with the poured babbitt shell bearings. The bed plate of this engine is designed to accommodate either type of bearing desired and is engineered so as to make both types of bearings easily interchangeable in the field.

The new 55-60 h.p. four-cycle engine is engineered for using Timken roller bearings, but is sold according to the desire of the individual purchaser. It has the engineering features of the smaller h.p. four-cycle Bessemers, including enclosed type bed plate with straight line wall construction, nickel-chromium iron-steel cylinders outside bolted to bed plate with cylinder skirt extending into the bed plate extension. It carries oversized, over-strength rods, bearings and bushing, the adjustable crosshead, simple valve mechanism consisting of valves mounted in cages or power cylinder and is operated by the roller bearing lay-shaft driven by spiral gears. It has the improved Bessemer fly-ball and roller bearing governor.

Accompanying photographs show the two new improved additions to the Bessemer oil field line.

The Guiberson Corporation, Dallas, Texas, has recently issued a descriptive combination pamphlet, printed in three colors, and describing, fully illustrated, the Type "E" and Type "A" swabs, and also the Guiberson liner swab.

In this pamphlet, which is published to be used as a supplement to former pamphlets, thereby giving the trade the latest information on Guiberson swabs, the three types are outlined in detail as to operation, assembly, and uses.

Ten features of the new Guiberson swabs are especially taken up in the recent pamphlet as follows: "Ability to pass projections, passes pipe joints uninjured, stems and jars not required to sink swab, swab practically non-leakable, swabs tubing as successfully as casing, same diameter cups will operate in two weights of casing, can remove water from beneath oil, will not kink wire line, durability of cups, and will not wear out casing."

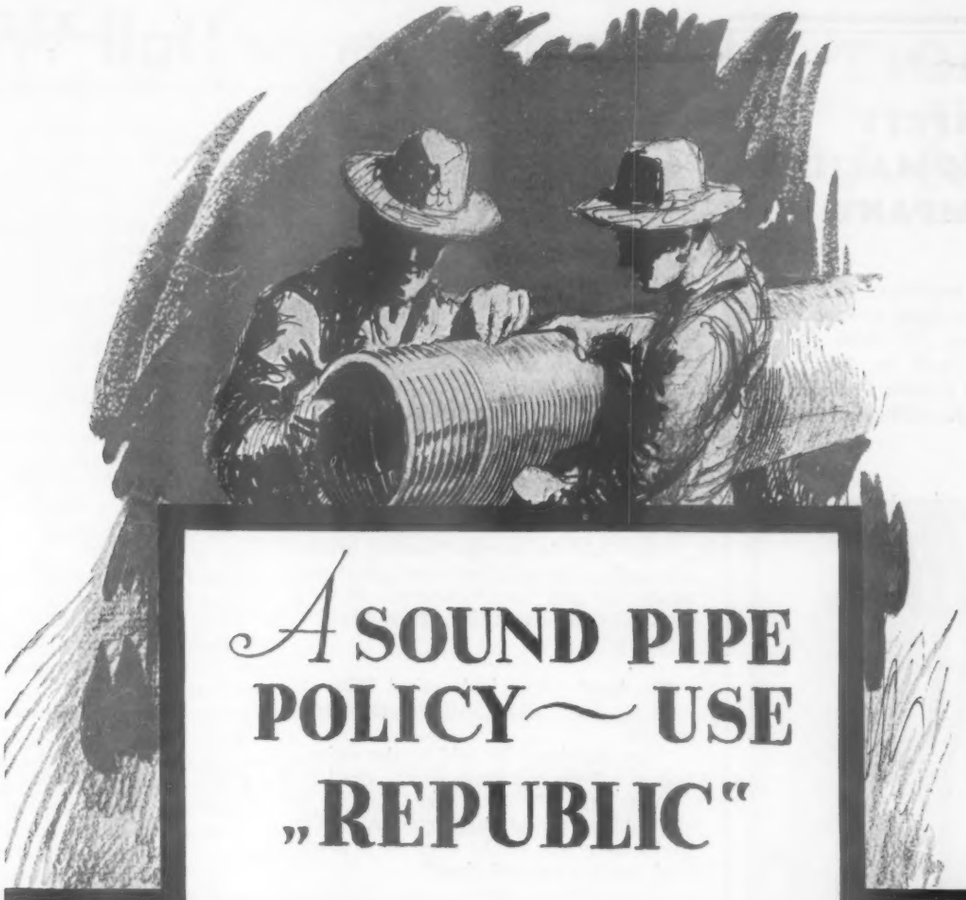
Byron Jackson Pump Company has appointed Arthur E. Raine as Mid-Continent manager of the oil tools division, according to a recent announcement by Leonard Vaughn, sales manager. Mr. Raine will have charge of sales and distribution in Texas, Louisiana, Oklahoma, Kansas, Wyoming and Colorado for his department. Headquarters of Byron Jackson Pump Company in the Mid-Continent are located at 214 East Brady Sereet, Tulsa, where a warehouse has been established and stocked with Wilson and Byron Jackson products.

Mr. Raine was for several years sales manager of Wilson Oil Tools Corporation, and prior to that connection was associated with the National Supply Company in Toledo.

One of the high spots of the convention of the Ohio Gas and Oil Men's Association which is to be held in Columbus, Ohio, on March 5 and 6, will be the luncheon which is being given the gas and oil men by the International Derrick & Equipment Company of Columbus, Ohio. Invitations for the luncheon will be distributed at the registration desk at the convention.

The luncheon will be held in the administration building of the International Derrick & Equipment Company, 875 Michigan Avenue, Columbus. Transportation will be provided for those who do not have their own cars.

The instrument department of Fort Worth Laboratories is now distributing its new illustrative catalog, No. 2000, which covers laboratory apparatus. Copies of this catalog will gladly be mailed interested persons, addressing Box 1008, Fort Worth.



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The name Republic on steel pipe and casing guarantees uniformity, high quality of material, clean threads well protected, and general excellence of workmanship.

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Say you saw it in The OIL WEEKLY

SAFETY PULLING MACHINE COMPANY

Wishes to announce that the Safety and Eclipse special Pulling Machines (7x10x36 ft. A-Mast) size will be equipped with Double Crown Pulleys, fitted with 2-15/16 Phosfer Bronze Bushings.

The price to remain the same. Safety $375.00. Eclipse $350.00. F. O. B. Factory.

Either the complete Machine or the Stripped Derrick equipped as above.

For complete description write

SAFETY PULLING MACHINE COMPANY

INDEPENDENCE, KANSAS

P. O. BOX 525

Squeaks from the Bull Wheel

Moe: "Will Jippem wipe out those debts of his?"

Joe: "Nope, he's not that kind of a sponge."

Two brothers were being entertained by a wealthy friend. As ill luck would have it, the talk drifted away from ordinary topics.

"Do you like Omar Khayyam?" thoughtlessly asked the host, trying to make conversation. The elder brother plunged heroically into the breach.

"Pretty well," he said, "but I prefer Chianti."

Nothing more was said on this subject until the brothers were on their way home.

"Bill," said the younger brother, breaking a painful silence, "why can't you leave things that you don't understand to me? Omar Khyyam ain't awine, you chump, it's a cheese."

The hotel patron had waited fully an hour for a very slow waiter to serve two courses.

"Now, brother," he said to the waiter, "can you bring me some tomato salad?"

"Yes, sir," said the waiter.

"And," continued the customer, "while you're away you might send me a postal card every now and then."

John Philip Sousa, famous band master, recalls an incident when he was playing in a small town in England, where he put up at an ordinary boarding house. Wishing to give the scrub woman in the house a complimentary ticket, he asked her how she would like to go to the band concert Thursday evening. "Is that the only night you got off?" retorted the woman.

That with our elders going in for Whoopee, Self-expression and Birth control, the old saying "What is the Younger Generation coming to?" has been changed to "Where is the Younger Generation coming from?"—*Life.*

"You say your baby is sick; what's the matter with it?" asked the friend.

"I think it has everything but sleeping sickness," sighed the weary young dad.

Wife—Don't you think Ihave put too much salt in the soup, dear?

Model Husband—Not at all, darling, there is, perhaps, too little soup for the salt, that is all.

Why, when my father was in condition, he could dive over a hundred feet into two feet of water.

That's nothing; my father once dove off the Eiffel Tower onto a damp rag.

Attorney—Don't worry, you won't be convicted. The jury will disagree.

Client—What makes you think so?

Attorney—I'm absolutely positive. Two of the members of the jury are man and wife.

When I said it takes three generations to make a gentleman, did Lawyer Jones think I was hitting at him?

Oh, no. He said he thought you were dreaming of the day when you might have a greatgrandson.

A farmer engaged the services of a wanderer who one night applied to him for a night's lodging and something to eat. All went satisfactorily for a week or so, and then the farmer routed out the newly hired man about 3:30 one morning.

"What's up, boss?" queried the hobo, drowsily rubbing his eyes.

"Time to get up and go to work."

"What's the big idea?"

"We're goin' to reap."

"Reap what?"

"Oats."

"Are they wild oats?"

"Wild oats? Of course not. Why?"

"Well, if they ain't wild oats, why do you have to sneak up on 'em like this in the dark?"

Jacob Epstein, the sculptor, was reproaching a London artist for his laziness. "You're like a girl novelist I know. You dream your work instead of doing it."

"Introduce me to that girl," said the artist. "We ought to be congenial."

"Yes," returned Epstein, "you'd make a wonderful couple. You could keep yourself busy illustrating the novels she doesn't write with the pictures you don't paint."

The improvident colonel had purchased an ancient hunter from the livery stable on the instalment plan.

A week after the deal had been completed, he rode over to see the owner of the stables.

"Hyde," he began, somewhat peremptorily, "I am not entirely satisfied with this animal."

"Oh," said the other. "What's wrong?"

"She won't hold her head up," the colonel complained bitterly.

The dealer grinned up at his client.

"That's only her pride," he said smoothly. "You just wait till she's paid for, and then see."

The customer stretched his legs and surveyed the remains of his glorious repast.

"Ask the manager to come along," he said to the waiter.

That worthy, suave and smiling, appeared.

"You the manager?"

"I have that pleasure, sir."

"Well," said the customer, "five years ago I dined here, was unable to pay my bill, and you kicked me out."

"I'm very sorry indeed, sir," said the manager, with an apologetic look; "but I'm sure you will understand that business is—er—"

"Oh, don't mention it. Might I trouble you again?"

Bryan Mound, Texas

--TIGHT--
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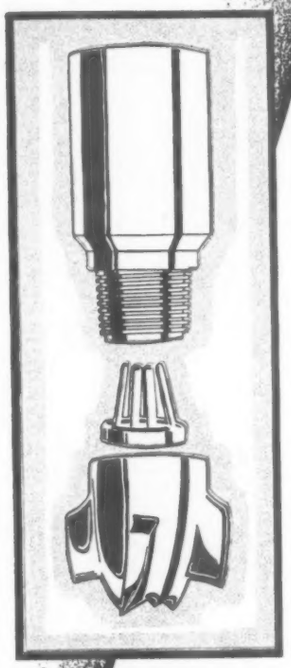
The Cost of Inadequate Coring Is Prohibitive



Elliott Core Drill for Rotary Tools

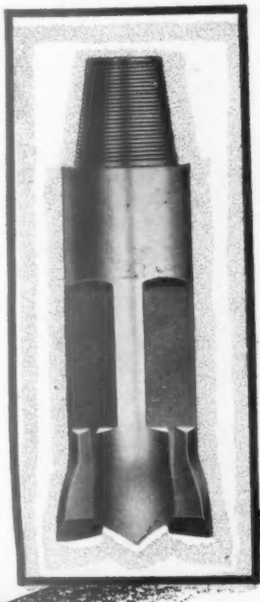
SOME field authorities have flatly declared that the failure of some of the smaller companies to break into large production is due to their failure to core adequately and efficiently; being inclined to accept correlated depths as facts rather than tentative guides and not wishing to spend money for coring to get actual data.

When the ultimate results of this intended economy are tabulated it is clearly evident that the cost of not coring, or inadequate coring, is prohibitive.

The only known means of determining what actually exists in the hidden structures of any well is efficient, dependable coring—coring that brings up perfect samples of the formations in their natural state.

To core is to know. Failure to core, or taking inadequate, imperfect cores, is gambling against heavy odds.

Elliott Cable Tool Core Drill



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Elliott Rotary and Cable Tool core drills

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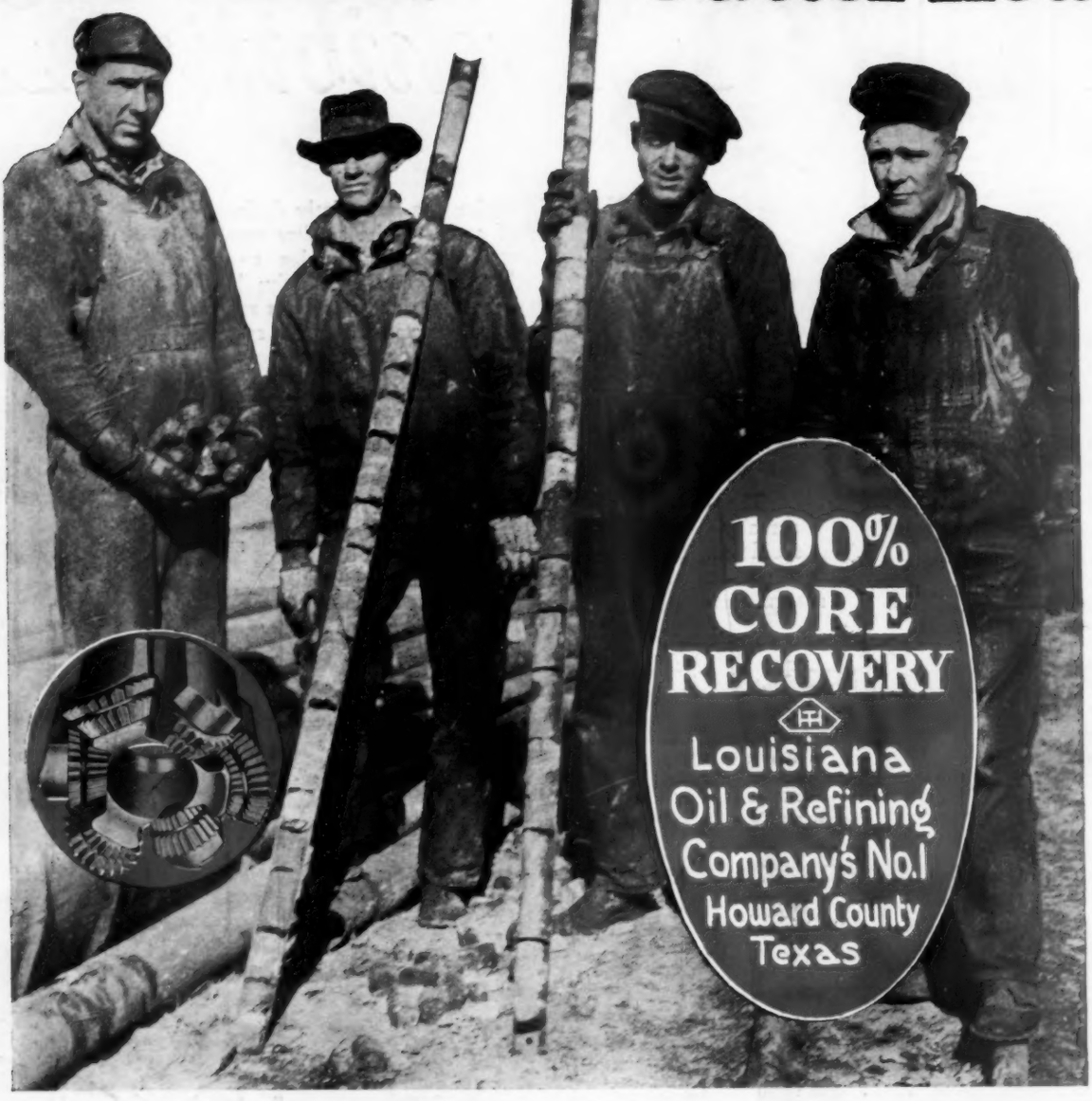

The above core was made in lime with a 6¼" Hughes Hard Formation Core Bit—Glasscock Bros. Drilling Contractors. The men in the picture are: (left to right) Lewis Ashley, driller; Frank Lentz, floorman; Dick Rhoten, floorman; Bill McKenzie, derrickman.

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